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WORKING PAPER ON PATENT LAW REVISION

PREPARED FOR THE DEPARTMENT OF
CONSUMER AND CORPORATE AFFAIRS

JUNE 1976





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WORKING PAPER

ON

PATENT LAW REVISION

DEPARTMENT OF CONSUMER AND CORPORATE AFFAIRS
HON. BRYCE MACKASEY, MINISTER

JUNE 1976

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The Honourable Bryce Mackasey
Minister of Consumer and Corporate Affairs
Hull, Quebec

Dear Mr Mackasey

I have the honour to transmit to you the Working Paper on
Patent Law Revision.

This working paper on patent law is the second of a series of papers in the field of intellectual property, following the earlier paper on trademark law revision published in February 1974.

The purpose of this paper, prepared by consultants working with officials within the Bureau of Intellectual Property, is to expose for public criticism proposals to reform the law respecting patents.

On the basis of discussions which will follow the publication of this paper, it is anticipated that the preparation of new legislation for modernizing Canada's patent law can proceed with a better understanding of this complex field of law.

Yours sincerely

Sylvia Ostry

ACKNOWLEDGMENT

Many persons have participated in discussions leading to the formulation of the various parts of this working paper. While these persons include a number of lawyers, economists and engineers within both the Bureau of Intellectual Property and the Department of Consumer and Corporate Affairs, special acknowledgment should go to consultants R O McGee, Professor Denis Magnusson, David French and Research Director Jacques Corbeil, working under the direction of A M Laidlaw, former Assistant Deputy Minister (Intellectual Property) & Commissioner of Patents and Dr David E Bond current Assistant Deputy Minister.

Furthermore a paper such as this cannot be prepared for publication without the assistance and cooperation of many people. The kind and efficient help given by all those who have assisted in typing, translating, correcting, copy-editing and proofreading and their often valuable suggestions should also be acknowledged.

PREFACE

This working paper on patent law is the second of a series of papers undertaken by the Department of Consumer and Corporate Affairs in the field of intellectual property. An earlier paper on trademark law revision was prepared within the department and published in February of 1974.

The purpose of this paper, prepared by a group of consultants working within the Research and International Affairs Branch of the Bureau of Intellectual Property, is to expose for public criticism, prior to the preparation by the government of draft legislation, proposals for reform of the law respecting patents.

The viewpoint and proposals developed within the working paper are those of the consultants and do not necessarily represent government policy. Rather, this working paper is being published in order to provoke a public response that will contribute to the formulation of government policy. The object is to enable the government to benefit from the participation of interested members of the Canadian public at an early stage in the process by which the laws in the field of intellectual property are reviewed and reshaped for the future.

The paper is not intended to be read just by experts. Persons potentially concerned with the nature of the patent law in Canada exist through all strata of society. It is hoped that this paper will stimulate and attract such groups as consumers, businessmen, patent agents and academics to contribute their views. It is with this varied audience in mind that a considerable amount of background material has been included in this working paper by way of quotations and appendices.

On the basis of consultations with and comments by trade and consumer associations, representatives of industry and individuals that arise out of the publication of this working paper, draft legislation for a new patent law in Canada will be prepared, taking into account the varied interests which will be affected.

The field of patent law is historically the oldest category of intellectual property to receive statutory recognition under Anglo-Saxon law. It is also the field which today will most likely attract an extreme diversity of opinion on the philosophical fundamentals of its existence and structure.

As a preliminary step to developing the policies which should govern the structure of a new patent law for Canada, this working paper attempts to carry out an evaluation of the basic rationale for maintaining the patent system. A discussion of the basic philosophical issues is set out in the first part of the working paper. This part contains a general

review of the background facts and issues which are relevant to understanding the patent system. It is on the basis of this review that the fundamental issue is raised of whether a patent system of traditional form can ultimately continue to serve Canada's national interests.

Considerable debate is likely to arise out of the discussion included in the first part of this working paper. Such debate must take into account the realities of Canada's modern economic circumstances. The debate should not proceed on historical or emotional grounds. Rather, the issues should be faced with dispassionate reasoning, based on analysis of what facts we now possess respecting the character of the present Canadian patent system.

There will always be resistance to proposals for change. Within industry and the patent profession, there is a complacency born of long years over which there has been little challenge to the basic premises supporting the patent industry. Businessmen themselves in many cases never go beyond the most rudimentary considerations with respect to the effects of the patent system. Complex matters are left to the specialists who often become spokesmen on behalf of industry when questions concerning the performance of the patent system are raised.

There will be those who argue that the present patent law system is working well, that some of the changes suggested cannot be proved superior and that no amendments should be made, except where beneficial effects can be predicted with certainty.

Care must be taken in implementing any procedure of review and reform not to reject out of hand the concern of such conservative tendencies. There exists an entire spectrum of opinion on what the future should hold for the patent system. But reform necessarily entails change and change will always be disruptive to the interests of some segments of society. The ability of society to absorb such disruptions is a limitation on the rate at which reform can proceed. The fact that change will be disruptive should not be the dominant consideration in deciding on the scope and extent of amendments to the law. Rather, against the transient costs of such disruptions must be balanced the long-term benefits of establishing a new law which is rationally adjusted to further Canada's best long-term interests.

It is with these limitations in mind that proposals have been drafted for a new, but interim, patent law for Canada. The law is to be interim pending the accumulation of data in anticipation that further revision may subsequently be required.

The proposed law, which is annexed to this working paper, in itself contains many proposals for substantive revision of the previous structures, proposals which, it is believed, can be justified by reliance on presently available facts. But the basic elements of a traditional patent law have still been retained for the purposes of an interim period of review.

The proposals for a new law are set forth in the format of a draft act. This lay draft has been prepared for discussion purposes only, without consultation from the Department of Justice. These draft provisions are not presented as the final form of recommendations for statutory revision, but are included to assist readers in focusing on the problems outlined and to facilitate public discussion. The Department of Justice will ultimately be responsible for the form of any legislation that is proposed for parliament.

Finally, the working paper should be read with the following concepts in mind.

1. A patent is a state-conferred monopoly which is granted to an individual for a limited time after which it becomes available to the public.

During the term of the patent the owner has the right to restrain anyone from interfering with his full enjoyment of that right, whether it be by manufacture, use, sale or via importation from any source whatever, including foreign affiliates.

2. The awarding of patents is only one of a host of programs and policies used by governments to stimulate the production and dissemination of technology and technological information.

These programs and policies include tax provisions, loan programs, technical services, tariffs and even subsidized postsecondary education. Thus an examination of the rôle of the patent system should not view this particular incentive mechanism as the only governmental device for supporting technological advancement in Canada. Rather, such an examination should proceed on the basis that a patent system is only one particular policy instrument among a variety available to government.

3. In the design of any general or particular incentive system to encourage the generation of knowledge related to invention or innovation, the problem is how that goal may be accomplished without at the same time unduly insulating the affected industries from the ultimate test of competitive forces in the marketplace.

In a recent article which analyzed the efficiency of systems for supporting the creation and dissemination of information, Harold Demsetz clearly described the dilemma inherent in designing any public policy or program:

"...the design of institutional arrangements that provide incentives to encourage experimentation... must strive to balance three objectives.

A wide variety of experimentation should be encouraged, investment should be channeled into promising varieties of experimentation and away from unpromising varieties, and the new knowledge that is acquired should be employed extensively. No known institutional arrangement can simultaneously maximize the degree to which each of these objectives is achieved. A difficult-to-achieve balance is sought between the returns that can be earned by additional experimentation, by giving directional guidance to investment in experimentation, and by reducing the cost of producing goods through the use of existing knowledge".*

An attempt has been made to take these considerations into account in the preparation of this working paper.

* Journal of Law and Economics, vol XII April 1969 p 20
"Information and Efficiency Another Viewpoint".

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- CMC - "Convention for the European Patent for the Common Market" (Common Market Convention) signed at Luxembourg, December 15, 1975.
- ECONOMIC COUNCIL - Economic Council of Canada "Report on Intellectual and Industrial Property", January, 1971.
- ECOSOC - United Nations Economic and Social Council.
- EPT - "Convention on the Grant of European Patents (European Patent Convention)" signed at Munich, October 5, 1973.
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- ILSLEY REPORT - Royal Commission of Patents, Copyright and Industrial Design "Report on Patents of Invention", Chairman - J. L. Ilsley, 1960.
- MACHLUP - STUDY No. 15 - "An Economic Review of the Patent System", prepared by Fritz Machlup for the Subcommittee on Patents, Trademarks and Copyrights of the Committee of the Judiciary of the US Senate, 1958.
- OECD - Organization for Economic Cooperation and Development
- PARIS CONVENTION - Paris Convention for the Protection of Industrial Property, March 20, 1883, revised at Brussels on December 14, 1900, at Washington on June 2, 1911, at The Hague on November 6, 1925, at London on June 2, 1934, at Lisbon on October 31, 1958, and at Stockholm on July 14, 1967.

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S-2504 - Bill S-2504 presented before the Senate of the United States, 93d Congress, by Mr Hugh Scott, October 1, 1973. (Committee Print, May 8, 1974).

SENATE REPORT ON SCIENCE POLICY - "A Science Policy for Canada" Report of the Senate Special Committee on Science Policy, Chairman - The Honourable Maurice Lamontagne, P.C. 1970.

UK ACT - Patent Act, 1949 of the United Kingdom as amended.

UK WHITE PAPER - "Patent Law Reform" and accompanying "Consultative Document" UK Department of Trade, April, 1975, Cmnd 6000.

UNCTAD - United Nations Conference on Trade and Development.

US CODE - United States Code, Title 35, - Patents, The Patent Act of 1952.

US PRESIDENTS COMMISSION- "To Promote the Progress of Useful Arts In An Age of Exploding Technology" Report of the Presidents Commission on the Patent System, 1966.

WIPO - World Intellectual Property Organization (Formerly BIRPI- The United International Bureaux for the Protection of Intellectual Property).

PART I - NATURE OF THE ISSUES

A Introduction

This working paper is really about two distinct issues. The first is the nature of the changes that should be made in order to improve Canada's patent law. The second is a more fundamental issue of whether it is in Canada's best interests to continue to maintain a patent law. Part I of this working paper deals with this latter issue in detail.

As indicated in the preface, the patent system was conceived and developed during an era in which economic circumstances were substantially different from those existing today.

It developed at a time when the delays and difficulties associated with transportation and communication were dominant factors in the processes of industrialization and trade. It also developed at a time when the pace of development and exploitation of new technology was more leisurely. But these conditions no longer exist today. As Canada enters the second stage of the industrial revolution, circumstances are arising which require a fundamental reevaluation of the rationale for Canada's continued maintenance of a patent system.

This need is all the greater in the context of Canada's special circumstances. As a relatively technologically-advanced country endowed with considerable natural resources but limited in the scope of industrial resources available to engage in the pursuit and exploitation of new technology, Canada cannot afford to maintain laws which intervene in the normal, competitive forces of a free market economy without clear evidence that such interventions will lead to a better use of Canada's limited resources.

The most prominent characteristic of the Canadian patent system is its overwhelming domination by foreign participation: 95% of all patents issued in Canada are based on inventions by foreigners! Given the inherent feature of a patent system, power is granted to individuals or corporations to suppress the use or adoption of new patented technology by others. The question, therefore, of how Canada can be benefiting from such a system cries out for an answer.

The patent system is supposed to be an instrument for advancing national technological development. Yet, the statistics with respect to foreign participation in Canada's patent system argue for the possibility that this law may be serving as a brake on the development of Canada's industrial infrastructure.

Foreign participation in Canada's patent system arises as a consequence of Canada's membership in the international convention governing industrial property rights -- the Paris Convention. Under the rules of this convention, members are required to allow equal access to local industrial property laws for nationals of member countries. The costs of foreign participation in the national patent system, it is usually argued, are balanced by the opportunity that exists for industrialists to acquire rights in the other countries of the union.

Canadian industry presently takes advantage of that privilege. But for every invention patented abroad by a Canadian, ten inventions are patented by foreigners in Canada. One of the issues which must be faced is whether this trade-off can usefully contribute to a balanced and rapid development of Canadian industry.

In making this evaluation, a further factor unique to Canada must be appreciated. Besides the fact that the Canadian patent system is particularly characterized by the overwhelming participation of foreigners as patentees, a substantial portion of the Canadian economy is owned or controlled, directly or indirectly, by non-residents. There is therefore no assurance that such rights as are acquired abroad, based on inventions originating in Canada, will, in fact, be exploited with the ultimate benefit of Canadian industry in mind. While the control that multinational enterprises may have over the activities of industry in Canada clearly cannot be governed through provisions in the patent law, it is still in Canada's interests to ensure that its patent law does not further entrench the influence that foreign corporations may have in Canada.

These special considerations, some of which are unique to Canada, along with the traditional criticisms of the patent system arising from the costs associated with the granting of private monopoly rights, are the basic reasons for raising these fundamental issues.

B Background to Reform

B.1 Historical Development

Among the earliest statutory laws passed by the Parliament of Canada after confederation was the Patent Act of 1869. However, even prior to confederation Canada had a formal system, supported by legislation, by which corporations or individuals could acquire an exclusive monopoly over the commercial exploitation of new inventions.

Substantial revisions were made to Canada's patent law in 1923 and 1935. Particularly from 1935 to the present day, Canada's patent law has included features adapted from or similar to features in the patent law systems of both the United States and the United Kingdom. Both of these countries are now in the process of moving to new patent laws.

Although it is sometimes said that the principle of granting patent monopolies was settled with the passing of the Statute of Monopolies in the United Kingdom in 1623, the system of granting private monopolies under patent law has always been a contentious issue throughout the world.

A great debate on the value of the patent system rose and fell during the nineteenth century*. More recently a similar debate has developed, growing with the formation of many new, independent, developing countries and with the corresponding moves for standardization of the patent system around the world. Economists in these more recent times have sought to expose the concept of the patent system to modern economic thinking. At the very least, their comments have unsettled the traditionalists who have taken the patent system for granted as a natural and essential economic instrument or as an inherent property right.

B.2 Contemporary Canadian Studies

B.2.1 Ilsley Commission

In 1954 the Canadian government established a royal commission under the chairmanship of the honourable J.L.Ilsley to inquire whether the federal legislation relating to patents was adequate under then present economic conditions. The report** of this commission, issued in 1959, contained extensive proposals for a revision and a complete redrafting of Canada's patent law.

The mandate of the Ilsley Commission extended to reviewing the effectiveness of the Patent Act as an instrument for providing (p 5):

"...reasonable incentive to invention and research...and to making available to the Canadian public scientific, technical -- creations and other applications, adaptation and uses, in a manner and on terms adequately safeguarding the paramount public interest..."

Undoubtedly, an economic analysis was indicated. An economic study, however, was not carried out. Economists sufficiently interested in the subject of patents were not available. Many expressed the need for such a study, but those who did so emphasized that this would be a lengthy and arduous process. The commissioners, however, recognizing the necessity and justification for such a study, reviewed at length many economic treatises carried out on the subject in foreign countries and briefly summarized their rather inconclusive evaluation in the report. The portion of the commission's report dealing with the question: "Should the patent system be maintained?" is reproduced in appendix B.

* A synopsis of this debate prepared by Fritz Machlup in "An Economic Review of the Patent System"; Study No. 15 prepared for the Subcommittee on Patents, Trademarks, and Copyrights of the Committee on the Judiciary of the US Senate is reproduced in appendix A.

** Royal Commission on Patents, Copyright and Industrial Designs, Report on Patents of Invention, 1960.

B.2.2 Economic Council of Canada

In recognition of the need for a deeper economic analysis of the issues, the government of Canada, on July 22, 1966, issued a reference to the Economic Council of Canada in which the council was requested:

"In the light of the Government's long-term economic objectives; to study and advise regarding: ...

...(c) patents, trademarks, copyright and registered industrial design".

The council eventually produced its "Report on Intellectual and Industrial Property" in 1971.* This report differed noticeably from the Ilesley Report which was almost solely legal, technical and procedural in character. Analyzing the patent system as one of the variety of governmental instruments for influencing the generation and transfer of information in society, the council emphasized that the costs associated with this system should be clearly understood and weighted in balancing the net benefit to Canada of this law.

Although the council endorsed the continued maintenance of the patent system as one of the various government instruments for providing an incentive to generate knowledge and information, a concern permeated the report that the patent system which had evolved in Canada might not be the one most suited to Canada's particular circumstances and environment.

B.2.3 Senate Special Committee on Science Policy

While the Economic Council was preparing its report, a special committee of the Senate was conducting an investigation into the issues surrounding development of a science policy for Canada. Formed under the chairmanship of Senator Maurice Lamontagne, this committee had released its report in three separate volumes issued during respective stages of the committee's deliberations.**

Two conclusions, above all else, flow from these volumes. The first is that government must become more aware and involved in the dynamics of controlling and influencing the exploitation of science and technology in the modern Canadian economy. The second, of relevance to the formulation of a new patent law for Canada, is that government policy should not concentrate on supporting research as an end in itself, but should design policies which will encourage research and development that will lead to industrial innovation.

* Information Canada, January, 1971.

** "A Science Policy for Canada" - Report of the Senate Special Committee on Science Policy, Information Canada, 1970.

In this respect, the committee took care to emphasize the importance of innovation apart from invention and the report contains the following statement: (vol. 2, p 376):

"Through innovations society either benefits or suffers from the applications of knowledge. Innovation can be defined in broad terms as the introduction for the first time in the world of a product, a service, a method or process of production, or a policy. The innovation process is highly irregular. It may begin with pure research leading to a scientific discovery... and the innovation itself. (The diffusion of innovations is also very important for strategy rather than science policy.)

"The Committee believes that the basic purpose of mission-oriented research and development, wherever they are done, is innovation. It considers innovation to be a major goal of science policy."

The Economic Council, in its report, also examined the importance of innovation in relation to the field of intellectual and industrial property and in particular with respect to patents. The council's views on innovation and the importance of encouraging innovation will be reviewed separately by this working paper.

B.3 Contemporary International Activities

Changes have been developing in the patent law systems of foreign countries at an accelerated pace.

B.3.1 Patent Cooperation Treaty (PCT)

The Patent Cooperation Treaty (PCT) has been approved as to form by a significant number of countries but has yet to be ratified by a sufficient number of states to enter into force. Discussions for the formulation of this treaty began in 1960 and concluded in 1970. The treaty itself is largely procedural in nature and will, if implemented, result in standardization of minimum disclosure requirements and of formalities prior to examination of applications for all participating countries. Its major procedural feature is that it will facilitate the acquisition of foreign patents by institutionalizing central filing and searching of prior art. It will also result in a delay in local filing and in publishing of patent applications, by establishing for participating states a minimum period of nondisclosure for new inventions of 18 months.

Canada signed this treaty but has not ratified it. The Canadian government is now assessing whether ratification of the treaty would be in Canada's best interests.

B.3.2 European Patent Treaty (EPT)

In Europe, the nine members of the European Economic Community and twelve other European countries have concluded discussions with respect to a further draft treaty, the European Patent Treaty

(EPT). Under EPT the standards for patentability will be unified among all participating countries. These countries will, however, reserve the power to determine the nature of patent rights locally, within each jurisdiction. The final version of EPT was approved at Munich in October, 1973 and will likely become effective in 1976-77, with the new European patent office opening in Munich in 1978-79.

B.3.3 Common Market Patent Convention (CMC)

Within the European Economic Community itself, yet a further convention has been drafted, the Common Market Convention (CMC) for a community patent. This convention, which was ratified on December 14, 1975, will create a single common patent with defined rights throughout the European Economic Community, which would eventually stand in lieu of individual national patents. As a convention, the CMC will operate independently of the more broadly based EPT, and for an interim period, persons obtaining a European patent will be able to elect with respect to common market countries between obtaining a national or community patent.

B.3.4 United Kingdom

In the United Kingdom various committees have been established over the years to review the British patent system. In 1949 the recommendations of the Swan committee led to substantial changes in the British law, incorporated in the 1949 UK Patents Act. It is that act which is now in force in the United Kingdom.

In 1967, a new committee under the chairmanship of Sir Maurice Banks was formed, producing a report in 1970 which reviewed the technical structure and possible changes in UK patent law in great detail. In April 1975, the Secretary of State for Trade in the United Kingdom tabled before the British Parliament a white paper setting forth the Government's proposals for patent law amendments. The changes proposed largely follow the Banks proposals and parallel the conclusions reached in the course of drafting the EPT and the CMC, in which British representatives played an active rôle. The proposed changes will affect matters of procedure, the definition of patentable subject matter, the scope of the patentee's right to restrain infringement and the term of protection, along with other technical matters.

The white paper also confirms the intention of the British government to support implementation of both the PCT and EPT.

B.3.5 United States of America

In the United States 75 years of experience and jurisprudence under the patent law were codified in the revision of the US patent law adopted in 1952. However, consideration of the patent system has continued since the date of that codification. Extensive analysis of the effects of the patent laws was developed before the US Senate Judiciary Subcommittee on Patents, Trademarks and Copyright during the 1950's.

In 1965 the US President established a commission to review and make proposals for changes in the patent law. The recommendations of this commission, published in 1966, while not wholly adopted by the business community, led to the drafting by the Department of Justice, the American Bar Association, the American Patent Lawyers Association and other bodies, of various new proposed laws. These and other proposals have led to a series of bills, none of which has yet been adopted by Congress.

A bill that has been extensively debated was that introduced by the administration in the Senate as bill S-2504 before the 93rd Congress. This bill, while debated before the above subcommittee in 1974, did not receive final approval in the Senate. Following the 1974 congressional elections, a new bill, S-2255 has been introduced before the Senate. Both bill S-2504 and S-2255 are representative of the scope of some of the most recent proposals for patent reform that have developed out of the years of debate and discussion in the United States.

B.3.6 International Organizations

In the World Intellectual Property Organization (WIPO) and within the United Nations, the developing countries of the world have shown increasing concern that the patent systems that they inherited after the period of colonial expansion may not actually be in their best interests. Concurrently, transfer of technology has become recognized as one of the main factors contributing to economic development and the patent system has become increasingly suspect as a hindrance rather than a help in this regard.

In 1964 the United Nations Department of Economic and Social Affairs (ECOSOC) prepared for publication by the Secretary General a report on the rôle of patent systems in effecting transfer of technology.* It concluded by generally supporting the continued use of patents by developing countries. A further report on this topic was issued by the United Nations Conference on Trade and Development (UNCTAD) in April 1974, which concluded that the world patent system, with its present constraints imposed by the Paris Convention, may not be serving an optimum rôle in assisting developing countries to acquire new technology.**

The developing states are now trying to gain recognition within UNCTAD and WIPO that they, as countries with more limited technological infrastructures, should not be subject to equal restraints under the Paris Convention. They have been pressing for the creation of exceptions and qualifications within the

* "The Rôle of Patents in the Transfer of Technology to Developing Countries" UN Document Sales No.: 65. II.B.1 (1964).

** "The Rôle of the Patent System in the Transfer of Technology to Developing Countries" UN Document GE74-44452, (1974).

international patent system, which system ensures that the patent laws of member states around the world all contain certain essential features as a minimum. The ultimate goal of the developing countries is to obtain the necessary freedom within the international system to shape their patent laws and to improve their prospects for further transfer of technology from the more technologically-advanced countries of the world.

B.3.7 Canada's Position in International Developments

Canada is classified by the United Nations as a developed country. However, Canada is also in the peculiar position of having many of the features of a developing country, (ie extensive foreign ownership of Canadian industry; short production runs; lack of product specialization; extensive reliance on natural-resource industries and extensive importation of new technology). This raises the question of the position that Canada should take with respect to the demands of the developing countries and the kind of patent system that Canada should endorse for adoption by other countries around the world. Clearly, Canada should recognize the special needs of developing countries and support any changes or provisions that will advance their interests without being destructive of world order. But Canada should also be prepared to recognize further and adopt any provisions which, while desirable for developing countries, are also singularly appropriate to countries which are in Canada's special situation.

B.4 Summary to Background to Reform

It is with this background in mind that the working paper for patent law reform has been prepared. In view of the many developments continually taking place around the world, it is clear that the need for a fundamental review of basic principles is appropriate. The need for such an analysis is all the more pressing in view of Canada's special circumstances. This need will not end, even with the implementation of the proposals made herein. However, the time has come to ensure that, if the patent law is to continue to exist in Canada, it should be shaped in a manner that serves the best interests of Canada.

C. Basic Issues - Background Facts

C.1 Different Intellectual Property Rights

The various types of industrial property, patents, trademarks, copyright and industrial design all involve a form of government-approved monopoly. But each is characteristically different from the others.

C.1.1 Essence of the Patent Right

The patent right is, in effect, a government-supported monopoly issued after examination to protect the commercial exploitation of ideas which are original, new and unobvious. (The expression

'original' is used in the copyright sense as meaning that the inventor has not acquired his idea from someone else, but has originated it himself).

These features of originality, newness and unobviousness (unobviousness perhaps might qualify as a subcategory of newness), when rolled together, can be summarized by the word 'invention'. For the purposes of patent law, ie the grant of an exclusive state-certified monopoly, an invention must not only qualify as such, but must also meet further standards, such as utility and functionality in an industrial or commercial context. Such inventions constitute 'patentable inventions'.

In the field of intellectual and industrial property the nature of the patent right qualifies it as the broadest and most extreme of all of these types of rights. The holder of the patent right may intervene to restrain the use by any person of an embodiment incorporating the patented idea. This intervention may take place notwithstanding that the person subject to such restraint has independently conceived the same idea.

C.1.2 Contrast With Copyright

At the other end of the spectrum from the patent right, copyright law grants to the owner of copyright a right to restrain others only from copying. Unlike patent law, the person who independently conceives a form of expression is free to exploit his own creation without fear of interference.

A person who conceives and develops a form of expression on his own account, independently of outside sources, (subject to his ability to prove these facts in court) can be assured that he will be free of copyright liability. The right afforded the creator under copyright law is in effect a right to be protected from the necessity of having to compete with the product of one's own effort. The right afforded under patent law is an absolute monopoly. This is one of the major distinctions between these two branches of intellectual property.

The other major distinction between them is that patent rights extend to control the flow of useful commodities, while copyright applies only to limit the circulation of aesthetic works or the adoption of specific styles of expression. Copyright can never extend to stop the dissemination or application of ideas.

Put in another manner, copyright rewards and supports creative expression, while the patent right arises from the creation of new inventions and applies in respect of the implementation of such inventions. By comparison therefore, copyright appears to be a much more socially-tolerable monopoly than that established under patent laws.

C.1.3 Comparison With Inventor's Certificates

Patents, with their inherent element of private monopoly, are not the only known device for giving recognition to invention.

Inventor's certificates are issued in various socialist countries. They give an inventor a right to compensation by way of royalty or fixed grant whenever his invention is used in industry. However, industry in the socialist countries is freely entitled to use any invention without fear of interference from the original inventor. Industries using inventions so disclosed are obligated to report such use to the proper authorities and it is on the basis of such activity that the inventor's compensation is calculated.

Through this method inventors are given credit for their contributions and an incentive to invent and disclose ideas is maintained. Under the inventor's certificate system, however, no right of monopoly is granted.

Under the patent system, the private monopoly granted can serve as a further incentive to encourage investment in the actual production of commercial products. No such incentive to implement an invention exists under an inventor's certificate system.

The similarity of the inventor's certificate to a patent system where patentees are under an obligation to grant compulsory licences as of right to all applicants is apparent. (Such a provision very nearly exists already under section 41 of the present act with respect to food and medicines). One of the differences between these two systems is that under a patent system, where a compulsory licence is available, a licence must be obtained before use or there is a risk of penalties, whereas under an inventor's certificate system, the right to use is unfettered (just as the Government of Canada's right to use under section 19 of the present act is unqualified).

C.2 Nature of the Patent Right

C.2.1 Objection to Monopolies

Monopoly is inherent in the patent right. Although qualified and limited by compulsory licensing and other restrictive provisions, a patent is still a form of monopoly as long as there is an element of exclusivity about the rights granted.

Monopolies have long been in periodic disfavour. Emperor Zeno of the Roman Empire in 480 A.D. is quoted at the beginning of a recent American text on patents as having proclaimed:

"We order that no one will dare exercise a monopoly upon any garment or fish or...any kind of thing in that respect, or any material, whether it is of its own authority or whether it is already ascertained in a sacred way, or by a later rescript or a sacred notation of our kindness..."

(R.A. Choate, "Cases and Materials on Patent Law", American Casebook Series 1973, at page 58; also cited by V. Mund, Monopoly - A History and Theory", 1932).

Monopolies are considered undesirable from various viewpoints for a variety of reasons.

Consumers object to monopolies when they perceive that, by reason of the monopolist's privileged position, they are forced to pay more for goods than they would if competition were permitted. Besides the objection that monopolists may use their position to support 'price gouging', where the price is too high, a sector of the consuming public will even be precluded from purchasing goods.

Businessmen object to monopolies when they find themselves excluded from a market, either because of a monopolist's marketing power or because of government intervention to reserve a monopoly position in certain fields or practices (such as public utilities and transit systems).

Economists object to monopoly because of the tendency of monopolies to lead to a less-than-optimum use of available resources.

C.2.1.1 Economic Inefficiency

The economist's concern that monopolies detract from economic efficiency and optimum national productivity was reviewed extensively by the Economic Council in its study on competition policy. In its Interim Report on Competition Policy (released while the Report on Intellectual and Industrial Property was still pending) the Economic Council stated (p 7):

"To many economists, the greatest objection to monopoly (again using the extreme example) is that it distorts the way scarce human and physical resources are brought together and used to meet the many demands of consumers. It leads, in other words, to inefficiency. The monopolist's prices are too high relative to other prices, and because the usual adjustment machinery is not operative, they remain so. As a result, 'relative prices become unreliable as indexes of relative scarcities and relative demands... too little will be produced and too few resources utilized in (monopolistic) industries with high margins; and too much will be produced and too many resources utilized in industries with low margins'. These distortions may occur primarily in final consumer markets, such as the market for some kinds of household appliances, or they may originate further back, say in the market where the appliance-maker buys his steel. They may include distortions of production methods, as for example where a high monopoly price for a certain kind of production machinery may cause the appliance-maker to use less of it than he ideally should. But wherever in the production and distribution process the distortion occurs, it will have an adverse effect on the quantities and varieties of products reaching the consumer and on the prices he pays for them."

These arguments raised against monopolies must be reconciled with government policy supporting any form of legislation which results in a grant to private individuals and corporations of exclusive rights in the nature of monopoly.

C.2.2 Economic Costs of Granting Patent Monopolies

The statement of the Economic Council with respect to monopolies in general, of course, applies to that special state-granted monopoly, the patent. That is, a patent, given its monopolistic character, cannot but lead to a distortion in the allocation of resources away from that which would exist in its absence. In economic theory, viewing the effects from the moment after which production of a protected product commences, this distortion is seen as reducing the efficient use of resources, both human and material.

But the 'costs' associated with the establishment of a patent system are not evidenced solely in these distortions in the allocation and returns paid to various resources. A complete listing of the costs to Canadian society of granting patent monopolies includes those associated with the administration of the system, and the impact that the system has over the longer period in determining the structure and rate of development of the economy.

C.2.2.1 Administrative Costs

While in the eyes of economists the greatest cost to society arising from the introduction of a patent system is the cumulative impact of the potential distortions in the allocation of resources, for many individuals the most visible costs are those directly associated with the administration of the system. These costs involve not only the expense of administering the patent office (currently approximately \$5 million per year) but the cumulative total of all fees paid both to the patent office and to patent agents and lawyers. A full accounting must also include the costs associated with the litigation of patents which involve not only legal fees but the use of court facilities.

These costs entail not only the actual expenditures of funds but must also be viewed as costs in the sense that, were the patent system not to exist, the expenditures associated with the system would not take place and therefore society would have both the funds and the associated resources available for alternative uses.

C.2.2.2 Costs Associated with the Duration of Patent Protection

It is often argued that the patent system has as one of its stated purposes the encouragement of invention and innovation. Without the patent system and its promise of exclusivity of exploitation for a fixed term, according to this thesis, society would fail to allocate sufficient resources to research and development. Thus the patent system, along with a host of other governmental programs, including beneficial tax treatment and a variety of

industrial development subsidies is supposedly used in an effort to correct this failure on the part of the market to allocate sufficient resources toward innovative activity.

If this thesis is valid, then the term of the patent is of great importance. A term of insufficient length will not serve to encourage innovation. Society will be burdened with all of the administrative costs associated with the patent system and yet receive little benefit in the form of increased innovation beyond that which would have existed in the absence of the patent system. But the longer the term of the patent and the greater the scope of its protection, the greater are the potential 'costs' to society as a whole.

The longer the term, the longer the insulation or protection enjoyed by the patentee from normal competitive pressures of the marketplace. As Adam Smith pointed out in the 18th century, it is the pressures of competition, combined with one's self interest, that leads the entrepreneur to always seek the more efficient methods of doing a given task. Patents are supposedly granted to provide a period of protection from these competitive pressures along with assuring an individual that he or she will share in the fruits of his or her intellectual creativity. But theoretically once that goal has been accomplished, ie that the individual has recouped his initial investment and made a 'reasonable' profit, then the continued maintenance of patent protection provides no direct benefit to society. Indeed the longer the term, the longer society must tolerate a distortion in the allocation of resources beyond that necessary to induce the original innovative activity. Moreover, the longer the term, the longer entrepreneurs are insulated from competitive pressures that might force them to adopt more efficient methods of production. In short, while the patent system has as one of its main purposes the encouragement of innovation, it may, under certain cases, in the long run, have the opposite effect by discouraging or at least impeding the introduction of new technology.

C.2.2.3 Costs Associated with the Scope of the Patent Monopoly

Two further points both relating to the scope of the protection afforded should be mentioned in relation to the granting of patents.

First, the broader the protection granted patentees, the greater may be the insulation of the owner from the competitive market pressures. And depending upon the extent of this insulation, it may induce the patentee to undertake investment in the production of patented goods, which, once protection ceases, no longer warrant continued production. This may particularly arise where, after protection ceases, foreign importers are able to supply the entire market at prices below the patentee's actual costs. As a consequence, not only is there distortion in the allocation of resources during the existence of the protection, but the fixed capital committed during the life of the patent has been wasted in that its value falls to zero when the patent lapses.

While economists have long advocated that bygones be bygones, or more colloquially, "There is no use crying over spilt milk", these lost or worthless sunken costs represent a permanent 'cost' which must be discounted by society as a whole over the full continuum of time. In short, the opportunity costs associated with the type of investment made feasible only because of a given term of patent protection may leave the public with access to the product, process or relevant technology, but at a cost higher than what at first appears in terms of investment and price. The loss of more efficient or viable opportunities to employ the same resources is something that must be borne by society in perpetuity.

The second point relating to the scope of protection is the argument sometimes offered that benefits would flow from a term of patent protection which is, in effect, infinite but very narrow. The combination of a long term but narrow scope would encourage, so the argument runs, others to 'patent around' the original innovation, to discover close, if not perfect, substitutes that offer alternative or additional features that may be desirable. Indeed the proponents of this thesis argue that too broad a scope of protection coupled with too short a term (something less than infinite but just how short is never stated) will simply discourage others from attempting to improve a product, knowing that within a specific period of time they will be able to produce or utilize the same product or process freely.

In its fundamental sense, this argument is similar to the thesis that the patent system is established to encourage innovation beyond what would exist under competitive market circumstances. What it fails to point out is that efforts to 'patent around' may be inherently wasteful by encouraging excessive investment of time and effort in duplicating work already done; that this repetitive research, perhaps coupled with increased litigation regarding patent validity, may yield progress in the form of alternative products and processes but at a cost in terms of efforts and resources that may have been unnecessarily wasted.

Economists refer in general to solutions similar to encouraging 'patenting around' as a second best solution. However, second-best solutions should only be considered when the optimal solution is precluded. Such is not the case at this juncture of the discussion.

C.2.2.4 Costs Associated with the Risks of Failure

The essential impact of providing patent protection can be viewed as increasing the expected yield associated with investment in an innovative activity. That is, if the innovation is successful, the rate of return on the investment will be greater than would be the case without the patent monopoly. Investment theory teaches that as the expected yield rises, so does the amount of investment. And as the amount of investment increases, the number of successes, ie innovations, carried through to production and adoption by society, would also increase. Indeed, it is this result which is supposedly one of the reasons for establishing the system. It must be remembered, however, that while the system may

raise the number of successes by encouraging innovation, it also will raise the number of failures. Indeed, it may even raise the proportion of failures to successes, the more it distorts the system toward undertaking investments which, in the absence of the patent system, the economy as a whole would avoid as being too risky relative to the expected yield.

Of course, this particular cost would not exist, if the existence of the patent system did not actually affect decisions to allocate resources to innovative activity.

C.2.2.5 Costs Associated with Delays in the Dissemination of Technology

The grant of a patent to any individual or firm, among other things, provides that firm or individual with a competitive advantage over the other participants within a given industrial sector. Moreover, in the absence of effective compulsory licensing, a patentee may be able to forestall the adoption of a new product or process by his competitors for a substantial period of time. Where new, patented technology relating to products or processes is controlled from abroad, this may have a severe impact upon the relative world-technological viability of domestic vs foreign industry. Therefore, in Canada's case, the inability of our industry to use new technology or to use it only at an excessive price, may impose substantial costs upon Canada, both in the rate of technical progress of its industry and in the ability of Canadian industry to compete effectively, in the domestic, as well as world markets.

C.2.2.6 Conclusion on Costs of Granting Patent Monopolies

In evaluating the net worth of the patent system, it is not sufficient simply to conclude that because it may encourage research and innovation it is necessarily beneficial to society. Rather it must be demonstrated that the system, whatever its form, serves to maximize the benefits and minimize the costs and that, moreover, the benefits exceed the costs in both the short and long run.

D Purpose of Granting Patents

D.1 Historical Rationales

D.1.1 The Patent as a Property Right

The Statute of Monopolies as enacted in the United Kingdom in 1623, although often referred to as the source of the patent system under Anglo-Saxon law, did not decide whether a system of granting patent monopolies for new invention should be established. Rather, the statute merely spared that class of letters patent from being outlawed along with monopoly rights in general. Patents for inventions did continue to be granted at the grace and favour of the crown, pursuant to the royal prerogative.

It was not until the nineteenth century that it came to be accepted within the United Kingdom that a subject had a right to obtain a patent. In France, however, the revolution brought forth a new recognition of the rights of inventors.

In 1791, France adopted a patent law which contained a recital to the following effect:

"Every novel idea whose realization or development can become useful to society belongs primarily to him who conceived it, and it would be a violation of the rights of man in their very essence if an industrial invention were not regarded as the property of its creator."*

The effect of this initiative on the part of French legislators was to lay the foundation for the theory that inventors are entitled to their patent rights as a matter of natural justice.

In the United States, article 8 of the Constitution provided that:

"The Congress shall have power...To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

The first US Patent Act was passed in 1790 with major revisions in 1836, 1870 and 1952.

The effect of the US constitutional provision, it has sometimes been facetiously said, is to ensure to every American citizen a constitutional right to a patent. On its face, the article does not, of course, suggest this. But the constitutional reference to the granting of exclusive rights will probably ensure that the patent system will be indefinitely retained in the United States as being so fundamental as to be beyond question. The United States patent will continue as a constitutionally-approved property right.

It has been suggested that the thesis that the granting of patents can be justified purely on the basis of recognition of the inherent right of a creator to enjoy the fruits of his creativity is not seriously advanced today. Fritz Machlup, in his monograph, Study No 15 for the US Senate**, suggested that the theory that there is a natural right in every inventor to control the use of

* Cited from UNCTAD Report, p 97; see also E.T. Penrose, "Economics of the Patent System", p 21.

** cf Machlup, Study No. 15, supra p 3.

his new ideas has been generally rejected (p 26). Yet the argument lingers on, like a ghost, colouring much of the thinking of those who attempt to analyze and justify the nature and scope of the patent right.

As recently as April, 1974, the UNCTAD Report on the Rôle of the Patent System (a document which, on the whole, takes a neutral attitude toward the basic worth of patents), acknowledged that:

"...patent laws are enacted partly as a recognition of a concept of a natural right in inventions" (p 4).

As a footnote the report quotes art 27, para 2, of the Universal Declaration of Human Rights, which provides that:

"Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author."

Further, art 15(1) of the International Convention on Economic, Social and Cultural Rights provides:

"15(1) The States Parties to the present covenant recognize the right of everyone:

(c) To benefit from the protection of the normal and material interests resulting from any scientific, literary or artistic production of which he is the author."

These references, however, confuse the distinction between authors and inventors. Authors are usually thought of as being creators. But, from a technical viewpoint, inventors do not 'create' inventions.

Inventions are inherently manifestations of the characteristics of the matter of which the world is made. The potential for a new product to be formed or a new process carried out resides in the very nature of the world. A distinction may therefore exist between the moral rights of an author to control his artistic or literary works and the rights of an inventor. The issue is whether, by being the first person to apply his ideas, an inventor obtains, as a property right, the power of excluding others from the benefits of that specific configuration which he calls 'his invention'.

The Economic Council dealt only briefly with the property right argument in the main body of its report, but attached an interesting appendix which attempted to explore the real nature of the meaning of 'property'. The report itself contains the following short reference (pp 31-2):

"It is sometimes argued that in (granting intellectual property rights,) the state is not merely granting rights for incentive purposes, but is instead defining, validating and protecting fundamental rights that were in some sense already there. The character of the rights involved in intellectual and industrial property is not an easy question, and countries have differed in the legal approaches that they have taken to it. The economic nature of these rights is discussed somewhat further in Appendix A. Suffice it to say here that the "fundamental rights" view of intellectual and industrial property is difficult to square with the history of these laws in Britain and Canada..."

In the appendix mentioned in the previous quotation the real meaning of the concept of 'property' or 'property rights' is pursued further. The argument set out suggests that the concept of 'property right', in the last analysis, requires only that society intervene to protect the interests of the individual. The expectation that this will happen in respect of such personal things as automobiles, wallets and land is beyond question. But this same expectation with respect to rights in new inventions is not so universally held.

Ultimately all property rights can be associated with some economic justification. People are not allowed to steal cars, although this might, for a temporary period, make such articles more readily available to members of the public. If property rights over automobiles were abolished, the results, economically, would be catastrophic. The purchasing and production of automobiles would cease.

The question arises, therefore, whether the same principle applies in respect of patent rights. Would the abolition of patent rights, with the result that new ideas, wherever public, become 'free goods', jeopardize or damage the process by which new ideas or inventions are generated and ultimately exploited?

This is the key issue that arises under the economic justification for the existence of patents. Objective evidence on this issue notwithstanding, the wealth of opinion that exists on either side is remarkably small.

D.1.2 The Right to Imitate

While the Statute of Monopolies may have been silent on the question, the theory that an inventor has a right to a patent, guaranteeing exclusive use of his invention, was clearly rebutted under the earliest Austrian patent law. A 1794 royal decree announcing the establishment of a patent system expressly stipulated that inventors neither had any property rights in their inventions, nor any rights to patents. Instead, the prerogative to grant exclusive privileges was said to be an exception to the natural right of citizens to imitate an inventor's idea (Machlup, Study No. 15, p 3).

The right to imitate has contemporary support as well. Donald F. Turner in a review of the patent system* quotes with approval the following passage from an article by Professor Rahl on "The Right to 'Appropriate Trade Values'" (23 Ohio St. L.J. 56, 70-72, 1962):

"In most of the important fields of human activity it is not usually considered wrong to imitate valuable things, ideas and methods. The more acceptable to society the thing is, the more others are encouraged to imitate it. Education is founded upon this premise, as is progress in science, art, literature, music and government...

"We have but to look around us to see that our "dynamic" economy is one which thrives upon and requires rapid imitation of innovated trade values...

"...(W)e cannot have a general rule against copying of published trade values and at the same time have an effective system of competition. Although competition has many definitions and descriptions, it is clear to all that it cannot exist without the availability of reasonably close alternatives for the satisfaction of economic wants...

"Substantial similarity of alternatives can come about in only one of two ways -- by independent development or by imitation. While there are many instances of simultaneous independent innovation, our economy would still be in the Dark Ages if this were the only circumstance under which competing alternatives could be offered. Imitation is inherent in any system of competition; it is imperative for an economy in which there is rapid technological advance...

"It is not freedom of competition which requires apology. It is interference with freedom which must always be explained."

And in a footnote, there is a quote from B. Kaplan, "An Unhurried View of Copyright" (1967) as follows:

"If man has any natural rights, not the least must be a right to imitate his fellows, and thus to reap where he has not sown. Education, after all, proceeds from a kind of mimicry, and 'progress', if it is not entirely an illusion, depends on generous indulgence of copying."

The Economic Council made this same point in its report quoting "Four Screen Plays" by Ingmar Bergman"(p 21):

* 'The Patent System and Competitive Policy', New York University Law Review, May 1969, at p 457)

"...A lot has been said about the value of originality, and I find this foolish. Either you are original or you are not. It is completely natural for artists to take from and give to each other, to borrow from and experience one another."

The United Nations Universal Declaration on Human Rights (referred to earlier on page 17) provides in the same art 27 subparagraph (1) that:

"Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advance and its benefits." (emphasis added)

Legal jurisprudence has also touched on this issue. In Canada, in a famous copyright case dealing with the issue of cable television (Canadian Admiral Corporation Ltd v Rediffusion Inc*) Mr Justice Cameron of the Exchequer Court of Canada felt free to state (at p 390):

"...no matter how 'piratical' the taking by one person of the work of another may appear to be, such taking cannot be an infringement of the rights of the latter unless copyright exists in that 'work' ..."

In other words, unless the law expressly supports the right to restrain the 'taking' by others of the products of one's labour or creative thought, everyone has the right to imitate.

In the United States, Mr Justice Brandeis in his much-quoted and often-applied dissent in the decision in International News Service v Associated Press**, summarized the tradition of the English common law by stating (p 225):

"The general rule of law is that the noblest of human productions--knowledge, truths ascertained, conceptions, and ideas--become after voluntary communication to others, free as the air to common use",

and at page 250:

"He who follows the pioneer into a new market, or engages in manufacture of an article newly introduced by another, seeks profits due largely to the labour and expense of the first adventurer; but the law sanctions, indeed encourages, the pursuit."

* (1954) Exchequer Court Reports 382.

** 248 United States Supreme Court Reports 215 (1918).

It is over this common law background that the state erects the restraints considered to be in the national interest under patent and copyright laws.*

If it is accepted that there is a right to imitate, then the patent system can only be justified on the basis that, by temporarily restraining imitation, society in the long run will be better off. Arguments as to the positive benefits of maintaining a patent system must therefore be very carefully analyzed on that basis.

D.2 Recent Evaluations of the Patent System

The general form of analysis of the rationale for the patent system adopted in many reports dealing with reform is to begin by asserting that the patent right operates as an incentive.

D.2.1 UK Swan Committee

The Swan committee in the United Kingdom, in 1949, charged with a review of the patent system, list four different stages in the process of innovation which are encouraged by the grant of patent rights. This list was quoted verbatim in the Ilsley Commission's report (at p 10, see appendix B).

D.2.2 Ilsley Commission

The Ilsley report quoted further passages from submissions before the United States Senate subcommittee on patents, which in effect reworded three of the four points cited from the Swan report. (cf appendix B)

D.2.3 US President's Report

The President's commission in the United States in 1966 dealt tersely with the rationale for maintaining the patent system. Their position was set out as follows (p 2):

"Agreeing that the patent system has in the past performed well its constitutional mandate "to promote the progress of...useful arts," the Commission asked itself: What is the basic worth of a patent system in the context of the present day conditions? The members of the Commission unanimously agreed that a patent system today is capable of continuing to provide an incentive to research, development and innovation. They have discovered no practical substitute for the unique service it renders.

* For a further review of the traditional view of the common law respecting the rights of the public under natural law vis-à-vis the rights of inventors, see the "Law of the Patents" William C. Robinson, 1890 Vol 1 pp 39-51.

"First, a patent system provides an incentive to invent by offering the possibility of reward to the inventor and to those who support him. This prospect encourages the expenditure of time and private risk capital in research and development efforts.

"Second, and complementary to the first, a patent system stimulates the investment of additional capital needed for the further development and marketing of the invention. In return, the patent owner is given the right, for a limited period, to exclude others from making, using, or selling the invented product or process.

"Third, by affording protection, a patent system encourages early public disclosure of technological information, some of which might otherwise be kept secret. Early disclosure reduces the likelihood of duplication of effort by others and provides a basis for further advances in the technology involved.

"Fourth, a patent system promotes the beneficial exchange of products, services and technological information across national boundaries by providing protection for industrial property of foreign nationals.

"Having satisfied itself as to the worth of a patent system, the Commission then undertook an extensive analysis of the many studies of US and foreign patent systems..."

This is the total analysis devoted to the issue of whether the patent system is ultimately of net benefit. It is remarkable for its brevity.

D.2.4 UK Banks Committee

The Banks committee, established in 1967 in the United Kingdom, following the path of the Swan committee, devoted in its report a five page chapter entitled "The Value of Patents" to the issue.* Again the four points of the Swan report were cited ending with the conclusion that (p 15):

"67 Our deliberations lead us to subscribe to the Swan Committee's conclusion that industrial development over the years justifies the patent system. We would sum up as follows:

- (i) Wherever industry has developed, patent systems have merged and been adopted and have played an important rôle in encouraging innovation.

* Included as appendix C.

- (ii) No alternative system for the encouragement and growth of new industry by private enterprise has been established.
- (iii) National patent systems have been of increasing importance in the world-wide development of technology, with resulting benefit to the expansion of international trade.

We concluded that the value of the patent system is established in the terms expressed above."

Again, the analysis contained in this study was of limited depth.

The conclusions of the last two studies cited applied to the US and the UK. The economic circumstances of these two countries may be sufficiently different from those of Canada to make those conclusions invalid for Canada.

The Economic Council explored various economic arguments for rationalizing the continued existence of the patent system in Canada. They did so, however, in the context of the broad area of intellectual and industrial property, ie patents, trademarks, copyright and registered industrial design.

D.3 Economic Council's Analysis

D.3.1 Information Policy

Much of the analysis of the Economic Council's report focused on the importance of intellectual property in the operation of the "total information system in Canada" (p 4). The background for analysis of patents as being part of the field of information policy was set out by stating (p 12):

"The growing socio-economic importance of information and its handling by now hardly needs arguing."

and (p 17):

"...in general, it can be said that the economic efficiency of a society's "total information system" is to be judged not only by its original 'learning' ability, but also by its ability to spread knowledge quickly, in low-cost and accessible form, among all those able to make good use of it."

The council's view on the relevance of information policy to patents may be seen from the following passages (p 31):

"Patents...are part of a class of policy tools used to improve Society's 'total information system' in sectors in which the production and distribution of knowledge might otherwise be inadequate..."

"In the case of patents...the knowledge to be produced is not in itself the ultimate objective, but is rather an 'intermediate input'..."

and, as part of the specific criteria set out for the patent system (p 84):

- (1) The Canadian patent system should encourage invention and other steps in the total innovative process within Canada.
- (2) It should encourage rapid and effective dissemination of technical information and other "technological transfer", both within Canada and between the rest of the world and Canada".

In effect the Economic Council saw the patent system, in common with the other fields of intellectual property, to a great extent as a vehicle for generating and disseminating information relevant to this innovation process.

D.3.2 Digression on Definitions -- Invention v Innovation

The use of the word 'innovation' in this working paper as distinct from the concept of 'invention' deserves special consideration. Invention is generally taken to mean a relatively subjective mental process by which a person conceives of a new idea. (It is subjective in the sense that a person may conceive of something which, in fact, is old, but nevertheless the person may be pleased and surprised with his own perception and insight).

Innovation in the industrial context and as applied to inventions can be used with various degrees of scope to its meaning. In its broadest sense industrial innovation, or simply "innovation", may be taken as the whole process of making an invention and carrying out subsequent steps by which it is put into commercial practice. The Economic Council in its report, citing its own "Fifth Annual Review - The Challenge of Growth and Change" uses innovation in this broader sense as follows (p 10):

"... innovation should be thought of as a total innovative process, involving a series of activities extending all the way from basic research to the final delivery of products in the market place."

By way of contrast, innovation in its narrower sense can also mean the processes of perfecting an invention which has already been made and carrying through to the point of getting the invention into commercial production. In either case, the concept of innovation entails the ultimate introduction of new or improved products into the marketplace.

It is convenient for the purposes of discussion in this paper to characterize innovation as a process that begins once an invention has been made. This distinction is important because different policy considerations may flow from attempts to analyze the process of invention as opposed to the process of innovation as defined herein. This distinction, the severability of the innovation process from research and development that may have preceded it, was recognized by the Economic Council in its Fifth Annual Review in the following terms (p 41):

"While R & D is concerned essentially with invention--with the conception of an idea, and the initial development of the idea--innovation is concerned with the crucial rôle of entrepreneurial decision-making and risk-taking in the 'follow-through' process, which involves the coupling of the initial idea or the results of R & D with engineering, design, financing, tooling-up, production and marketing. Thus R & D by itself may add nothing to economic growth. It is the innovation process -- beginning when management decides to move from R & D into engineering, design and all of the succeeding stages -- which brings new products, processes and services into use, and which contributes to growth."

For convenience, table 1 has been included to clarify the distinction between 'invention' and 'innovation', as these expressions are used within this working paper.

As indicated in table 1, invention may, to some extent, extend beyond the stage of conception into the stage of postinvention development where a fuller understanding of the invention and its potential applications are established. The process of innovation, too, may involve a development phase in which new techniques for practical commercialization of the idea are explored. The full process of commercialization often involves solving problems of mass production, the supply of raw materials, promoting the product and a general search for the conditions which will optimize the application of the invention in the commercial manufacturing process. As will be apparent from subsequent discussion, invention is not necessarily the most difficult, risky or expensive stage in the process leading to a successful commercial innovation.

D.3.3 Innovation

In its Fifth Annual Review following its description of innovation, as set out above, the Economic Council quoted with apparent approval (p 41) the following passage from "Technological Innovation: Its Environment and Management", (a report of a panel of experts established by the US Secretary of Commerce):

"We need also to bear in mind that the path between an invention (or idea) and the market place is a hazardous venture, replete with obstacles and substantial risks. It is ordinarily a very costly, time consuming, and difficult task that the innovator faces."

DEFINITIONS

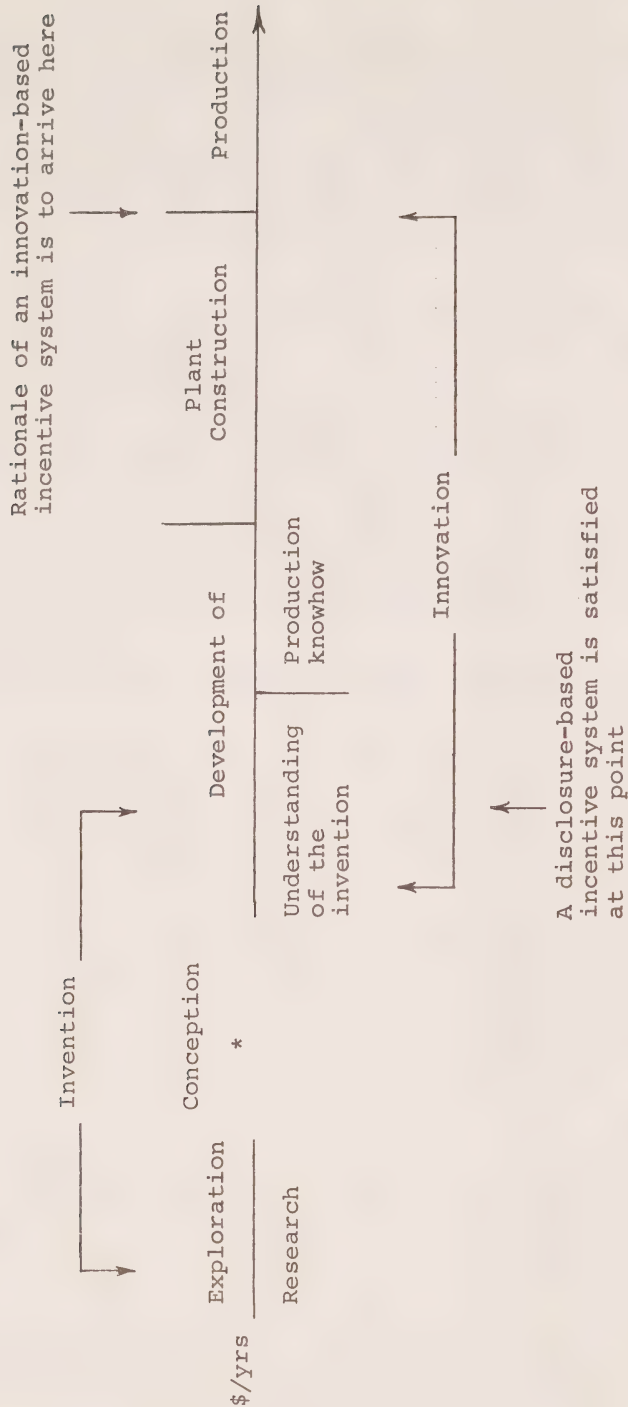


Table 1

Clearly, the Economic Council recognized the distinction between innovation and invention. However, in its report on intellectual and industrial property, the rôle of patents was given preeminence in the generation and transmission of information.

References to innovation and the relationship of information to innovation are set out in that report as follows (p 9):

"In order for its economy to grow and develop satisfactorily, a society must be innovative;... it must be well informed; and to be well informed, it must be good at the production, distribution and use of knowledge".

and continuing the quotation cited earlier (supra p 23):

"... in general, it can be said that the economic efficiency of a society's "total information system" is to be judged not only by its original "learning" ability, but also by its ability to spread knowledge quickly, in low-cost and accessible form, among all those able to make good use of it. This is an essential relationship between innovation and information; a high-innovation society is likely to be outstanding at distributing information as well as at producing knowledge. Only if both phases of the system are working well can large benefits be assured to ... the consumer and other important segments of the economy".

and (p 21):

"From the standpoint of Canadian economic policy, the critical point here is that production and use of knowledge are so intermingled -- that highly effective producers of knowledge are typically highly effective users of it, and vice versa. This means that Canada's performance as a knowledge-producer and its performance as a knowledge-user are closely interrelated. Canada must indeed be a very capable producer of original knowledge, but not to the exclusion of achieving fast, low-cost internal distribution of information, coupled with the most favourable possible access to foreign information".

Further, the Economic Council recognized the rôle that patents can play as an incentive to innovation (p 9):

"The patent system has long been regarded as a policy tool for the encouragement of industrial innovation".

However, the report then went to warn of the dangers of providing too much incentive to innovation (p 10):

"While policy normally strives mainly to increase the commitment of resources to innovation, it must guard against the very real danger that a society may become too innovative, at least in certain directions. To use

one of the Robinson Crusoe examples beloved of elementary economics teachers, if Crusoe spends too much time innovating a shovel for himself and not enough time harvesting breadfruit and coconuts, he is likely to starve to death. In a more modern setting, the possibility of too much innovation is suggested by the fate of some excessively future-oriented companies that have put too many of their resources into new product development and not enough into current production and sales. Also the balance within a society's total innovative effort is important. If, for example, patent incentives are so strong as to attract an excessive proportion of the always limited supply of innovatively talented people into the production of patented inventions, and away from teaching and basic scientific research, the result will be self-defeating in the long run as the next generation finds itself with too few well trained inventors and with insufficient grasp of fundamental science for its effective application. On the other hand, if very large and generous resources are available to support teaching and basic research, thus attracting a very high proportion of innovatively talented people into these activities, the result may be too little inventive and innovative activity on the frontiers of knowledge-use".

The recent demise of Microsystems International Ltd, an attempt by Northern Electric (with considerable support from the Canadian government) to establish a large-scale, solid-state microcircuitry industry in Canada, is an example of the potential costs of failure in such fields. Established in 1969, the Canadian government spent over \$30,000,000 in support of this company (Hansard p 3834, March 6, 1975). The decline of Microsystems is summarized in the following excerpt from the Ottawa Citizen of March 5, 1975 (p 9):

"Since it was established, the firm has had sales of \$5.9 million in 1969, \$6.3 million in 1970, \$9.0 million in 1971, \$12.3 million in 1972, \$20.5 million in 1973 and \$29.43 million in 1974

"It has had losses of \$3.3 million in 1969, \$7.1 million in 1970, \$6.4 million in 1971, \$4.2 million in 1972, \$10.1 million in 1973 and \$12.25 million in 1974."

This is an example of an attempt to support the establishment of a new industry in Canada based on advanced technology; it is also demonstrative of the risks and costs of failure.

In summarizing its specific criteria for the Canadian patent system, (at pp 84-85) the report warned that the patent system:

"... should not encourage, as it might if the working-in-Canada provisions of the existing Patent Act were vigorously enforced, a new proliferation of small-scale, high-cost manufacturing in Canada. Rather, it should help to promote the kind of internationally

competitive pattern of secondary manufacturing that was envisaged in the "Scale and Specialization" chapter of the Economic Council's Fourth Annual Review. While working of foreign inventions in Canada is normally the most complete and effective means of technological transfer into Canada, it is achieved at too high a cost if it results in Canadian resources being used in productive ventures that can never aspire to exports and can only go on existing domestically behind an absolute patent barrier to imports. In such cases efforts should be concentrated on conveying knowledge of the relevant technology into Canada by other means, on a purely informational basis for the time being".

Thus, of the three headings under which the patent system can be justified as an economic instrument, ie by serving as an incentive for:

- (1) research (leading to invention),
- (2) disclosure (of invention), and
- (3) innovation (based on invention);

the Economic Council apparently saw the beneficial rôle of the patent system under Canada's special circumstances as focused mainly on the first two categories.

D.3.4 Digression on the Meaning of 'Incentive'

In any attempt to canvass the various reasons put forward for maintaining the patent system, the word 'incentive' will appear repeatedly. An understanding of the relevance of the incentive effects of the patent system is essential in a fundamental review of patent policy. The positive benefits arising from such incentive effects will have to be balanced against the costs of maintaining the system in order to determine its net worth.

Whether the patent system is of any effect as an incentive device may be tested by asking the following question:

"Do patents (or rights to obtain patents) induce persons to proceed into areas that they would not have otherwise entered?"

or:

"But for the grant of patent rights, would industry have performed in any different manner?"

A reward offered as an incentive is a useless and wasteful gesture if it is granted for conduct that would have taken place in any event. The whole worth of the patent system turns on whether it is effective as an incentive device.

The question is not, therefore, whether patentees or industrialists 'like' to obtain patent rights, but whether with a patent system, their behaviour is different from what their behaviour would have been in the absence of a patent system. If the patent system is ineffective as an incentive instrument, then there is no economic justification for its continued existence.

The Economic Council briefly stated the incentive argument respecting patents as follows (p 32):

"What society appears to do is to use the policy instrument of intellectual and industrial property rights in certain parts only of the total information system -- in parts where there is widely agreed to be a serious problem of underproduction and underprocessing of knowledge, and where this particular kind of incentive, by itself or in association with others, seems likely to be an appropriate means of improving the situation".

But this statement, proceeding on the assumption that patents actually perform as an incentive to support research or innovation, ignores other factors which encourage these activities. This is a substantial issue, as yet unanswered by authoritative research. Are competitive forces, apart from the existence of the patent system, capable of serving as a sufficient encouragement to motivate industry to undertake research and innovation?

Attempts have been made to correlate statistically the rate of issuance of patents to aspects of economic growth. Such correlations will not, however, establish that a cause-and-effect relationship exists. If the patent system is shown to have an influencing effect, this effect must be measured at the earliest point in the system, before inventions have been made and patents have been granted.

If the patent system has any benefit it must arise by reason of the effect that it has on either decisions to carry out research made before any invention has been conceived, or decisions to proceed with the development and marketing of new products before those products have proved themselves in the marketplace.

An analysis of the patent system based upon evaluating its performance as an incentive system is similar in nature to the problem of evaluating the operation of the criminal law.

The criminal law, in one respect, is maintained because it is assumed that it operates as a deterrent. Everyone is familiar with the argument that it is necessary to maintain, under the criminal law, a system of enforcing consistent, certain punishment in order to deter persons from committing crimes. When an attempt is made, however, to evaluate the effect of the criminal law as a deterrent the most apparent and easily examined aspects of the criminal law system are the penal institutions, prisons and the people who populate them. However, the success of the system cannot be determined simply by examining the prison population.

For these persons, the criminal law as a deterrent force has failed. The success of the criminal law system must be measured on the street where its effect as a deterrent is presumably operating on ordinary citizens.

The deterrent effect of the criminal law makes people fear the consequences of committing crime, ie loss of freedom and reputation or the financial loss of a fine. In effect, the law is an incentive to abstain from crime. The patent system depends for its success on similar effects. The incentive to invent and innovate, if it exists to any real extent, must arise from the prospect of future financial benefits, benefits arising either through licence royalties or from the profits that may be obtained by marketing products in a competition-free environment.

These positive effects take place at points or moments which are beyond direct analysis, where the systems influence people's decisions. While the actual performance of the patent system may be difficult to measure, it is only this influence which counts.

In this vein then, the evaluation of the worth of the patent system should be based on an examination of its impact as an incentive device.

E Worth of the Patent System

E.1 As an Incentive to Research

In the past, evaluation of the impact of patents as an incentive to research has been largely subjective. The Ilsley Royal Commission in its report reviewed some of the contemporary viewpoints then existing on the worth of the patent system as an incentive device. In this regard Professor Seymour Melman's report to the US Senate subcommittee (study no 11) was then quoted as follows (p 12):

"With or without a patent system, the efficient pursuit of knowledge in the universities and other nonprofit institutions ...will continue as a sufficient end in itself. Industrial firms will continue to enlarge their research in the useful arts as dictated by competitive needs, with or without patent privileges. Henceforth, in the judgment of this writer, the main impetus for the promotion of science and the useful arts will come, not from the patent system, but from forces and factors that lie outside that system".

The Ilsley Report itself adopted the now famous conclusion contained in Machlup study that there was insufficient knowledge of the operation of the patent system to evaluate its net benefit to society or support either the institution or repeal of the system, (appendix B pp 11, 12).

Ten years later the Banks Committee after three years of deliberation on the effectiveness and suitability of the patent system for the UK, was still able to state (p 10, para 44):

"We have been unable to locate any relevant report or series of reports made in the United Kingdom or elsewhere which are generally accepted as based on an economic assessment made in depth and with academic objectivity".

Since the publication of the Banks Report three major works of particular relevance to Canada have been published. The first is the report of the Economic Council referred to above. The other two documents are the Cambridge University study by Taylor and Silberston, "The Economic Impact of the Patent System", and the Canadian work by O.J. Firestone, "The Economic Impact of Patents". This latter work consolidates much of the information gathered for the report of the Economic Council.

"The Economic Impact of the Patent System" is a monograph prepared by the University of Cambridge's Department of Applied Economics. It is based on a three-year project designed to assess the economic consequences of maintaining the kind of patent system now operating in the UK. The project included a survey which concentrated on 30 firms selected from a list of 150 firms, as a general cross-section of British industry. A further 14 firms were also interviewed directly.

"The Economic Impact of Patents" by Firestone is based on a statistical sampling survey of patents issued in Canada in 1957, 1960 and 1963, and also on in-depth interviews with 15 of the major corporations operating in Canada. An attempt was made to include all patents granted to Canadian resident owners in the survey and approximately 5% of patents granted to foreign owners. One third of the 5,709 questionnaires mailed produced usable returns.

E.1.1 Cambridge Report

The Cambridge report did not generally attempt to assess the impact of the abolition of the patent system. An alternate proposition was put to industrialists in this survey. This proposition is summarized in the words of one of the authors of the report, C.T. Taylor, as follows:

"If in recent years your company had operated under a régime of world-wide, thoroughgoing, compulsory licensing, so that you would have been able to patent your inventions at home and overseas in the normal way, but you could not refuse any application for licence on reasonable commercial terms, what difference would it have made to your operations?" ("Do We Still Need A Patent System", Chartered Institute of Patent Agents Journal, April 1973)

The study concentrated on this rather than complete abolition of the patent system because complete abolition did not then seem a likely prospect (Cambridge pp 85-88). Some questions were, however, directed in certain respects to the effect of a 'no-patent' alternative.

Summarizing responses to a question concerning the proportion of actual past research projects in which patentability was a decisive criterion for deciding whether or not to go ahead, the Cambridge Report states (p 195):

"Of 34 returns received the answers were as follows:

	Number of Returns	(%)
Never	7	21
In very few cases	18	53
In a significant proportion (up to 10%) of cases	5	15
In over 10% of cases	<u>4</u>	<u>12</u>
<u>Total</u>	<u>34</u>	<u>100</u>

Of the 9 returns in which patents were said to be decisive in a significant proportion of projects, six were in finished and specialty chemicals (with pharmaceuticals and crop protection chemicals prominent), one in basic chemicals, one in industrial plant and one in automotive components."

Regarding the hypothetical question of the effect that an absence of availability of patent rights would have had on past decisions to carry out research, table 2 herein shows the results tabulated in the Cambridge Report (table 9.1, p 195).

In summary to both questions, over 70% of the responses indicated that the prospect of obtaining patent rights had little or no effect on the decision to pursue research.

The overall conclusions of the Cambridge Report with respect to the incentive value of patents were as follows (p 346-7):

Summary of Effects

"At the risk of drastic oversimplification, our findings concerning the economic impact of the patent system in comparison with our standard alternative of worldwide compulsory licensing can be summarised as follows:

(a) Industrial research and innovation. The impact on the rate and direction of inventive and innovative activity undertaken by industry is extremely small on the whole in all areas examined except the 'secondary' (nonbasic) chemical industries. There, pharmaceuticals stand out as an industry in which probably at least one-half of invention and innovation is heavily dependent on patent protection. A similar degree of dependence

Table 2

Estimated proportions of R & D expenditure dependent on patent protection: 27 responding companies (table 9.1 of the Cambridge Report).

Industry	Proportion of R & D affected*			Total of returns
	None or negligible	Very little (less than 5%)	Some Substantial (5-20%) (over 20%)	
(Number of returns)				
Chemicals:				
Finished and specialty	1	2	1	4
Basic	1	2	1	4
Subtotal	2	4	2	8
Mechanical engineering	7	1	0	8
Man-made fibres	1	1	0	2
Electrical engineering	7	1	0	8
Total	17	7	2	32**
Percentage of returns	53	22	6	100

NOTES:

* Percentages refer to the estimated reduction in annual R & D in recent years that would have been experienced, had patent monopolies not been available.

** Some companies made returns for more than one activity.

probably exists in crop chemicals and one or two other industries producing research-intensive chemicals for relatively limited markets. Certain other chemical product areas such as novel plastics materials and sophisticated industrial chemicals show a lower but still appreciable degree of patent-dependence. In contrast, R & D in basic chemicals, including petroleum chemicals, is very little affected, and not at all in oil processing and refining.

(b) Nonindustrial invention and innovation. Inventive and innovative activity outside large-scale industry appears on the whole to be very little affected. The small-scale efforts of the individual inventor and the very small firm do not seem to derive anything like as much stimulation from patent monopolies as has sometimes been thought. The profit motive is seldom a principal consideration for the dedicated private inventor, while the work of the very small research-based firm is often complementary to or derived from the operations of larger firms. It is noticeable that small inventors are not very active in the chemical fields found to be responsive to patent protection; they concentrate mainly on the mechanical and electrical field, where 'strong' patents are very few and far between. It should also be noted that the amount of resources devoted to small-scale invention and innovation is quite minor compared with amounts spent in industry.

"On the other hand, it cannot be denied that small inventors are prolific generators of patentable inventions in relation to the resources used, and that the proportion of all valuable inventions that is attributable to the small man seems considerably higher than the proportion of resources used by them. Neither can it be denied that there have been cases--although apparently extremely few--in which prospective patent protection has been an important factor in inducing small inventors to persist for years with basic inventions which ultimately became major innovations (after industrial development). The patent system can therefore claim at least part of the credit for a very limited number of important innovations--possibly not many more than a small handful--resulting from the work of the small UK inventor in the last ten or so years.

"Inventive activity in universities, technical colleges and government research institutions is essentially a subordinate activity deriving from scientific and technical research that owes virtually nothing to the profit motive. Inventions from these sources which have commercial potential are almost invariably transferred to industrial firms, most commonly nowadays through the agency of the National Research Development Corporation.

"Their development then becomes subject to the same considerations and arguments as apply to other R & D projects undertaken in private industry. For these reasons, the patent system can claim no credit in stimulating 'institutional' research which has not already been counted in relation either to industry or to the small inventor".*

E.1.2 Firestone Survey

The Firestone survey reached similar conclusions. In that report the following statement is made (p 169):

"... while a majority of companies look at the patent system as a major inducement to innovate, a large part if not the major part of R & D work would continue to take place in Canada even if this country had no patent system or if the protection currently provided under the system would be considerably reduced.

"According to the information provided by the companies interviewed, three fifths of the R & D work carried on in Canada is proceeded with for good economic reasons, with patent protection being only a minor factor. Hence, it may be difficult to justify the continuation of the Canadian patent system, mainly on the ground that a major part of Canada's R & D effort depends on it.

"Admittedly, if the patent system were abolished or its protective features severely curtailed, this could constitute a disincentive for some of the R & D work currently undertaken in Canada or contemplated for the future. But the extent of it may be less than suggested by strong advocates of the status quo.

"In fact some of the firms interviewed stated that they would proceed with their R & D work in any event, and that they were forced to do so to keep up with competition, both domestic and foreign."

The Firestone Report then proceeded to analyze the alternative factors influencing research and development in Canada as follows (p 171):

* The alternative of a world-wide licensing system mentioned in the first paragraph of the above summary was only introduced in dealing with the impact of patent rights on the incentive to innovate. The alternative in respect to questions directed at inducement to carry out research was the absence of patent rights (Form A, question VI-6, Cambridge Report p 396).

"If one accepts the supposition that patents are not a major factor in the pursuit of R & D in Canada, then the question arises: What is the major factor? The answer given by the executives interviewed was that competition was the greatest factor in influencing the type and the dimension of R & D programs in Canadian business.

"Competition was considered to be more important than the patent system or incentives offered by government. Only two out of the fifteen firms, with 1.2 per cent of total R & D expenditure stated that the size of their program had been affected to a major extent by government incentives including subsidies and tax concessions.
. . .

"The thirteen firms out of a total of fifteen which undertook R & D work in Canada said that competition was a factor in proceeding with programs in this field. Of these, nine firms representing 81.3 per cent of total R & D expenditures, said it was a major factor, and 18.7 per cent said it was a minor factor, (see below).

<u>"Effect of Competition</u>	<u>Number of Firms</u>	<u>R & D Expenditures - 1967</u>	
		<u>\$ Mill</u>	<u>Per Cent</u>
Major	9	63.0	81.3
Minor	4	14.5	18.7
No. R & D	2	-	-
Total	15	77.5	100.0"

These were conclusions reached on the basis of the Firestone survey.

E.1.3 Patent Utilization Study

The results of the Firestone survey appear to confirm the conclusions reached in an earlier US study by researchers at the Patent, Trademark and Copyright Research Institute of George Washington University. Based on a survey of 600 patent assignees, as part of the "Patent Utilization Study" then being conducted, 70% of the patentees replying indicated that they would have developed the invention even if there had been no patent protection.*

E.1.4 Science Council Survey

Yet another survey has been carried out in Canada, apart from that of Firestone's. Special study no 11, done by Andrew H. Wilson for

* (B.S. Saunders, J. Rossman and L.J. Harris, "Attitudes of Assignees Toward Patented Inventions", IDEA, December 1957.)

the Science Council of Canada, published in 1970, was based on a series of interviews with 80 companies held during 1967-68. In this report the following statement is made (p 39):

"In the opinion of the industry people with whom the question was discussed, patents play little or no part in the initiation of research programs or projects but may play a much larger part in the initiation of development work."

E.1.5 Conclusion on Research Incentive

These studies cannot be accepted as conclusive. However, on the basis of these attempts to survey the psychological effect of the patent system on decisions to undertake research, we might conclude that there is little justification, on this ground alone, to maintain the present system.

Of course, patent proponents will always be able to cite instances where the potential for acquiring valuable patent rights was an effective incentive. But the wholesale granting of patent rights for all inventions may not be a worthwhile way of providing the encouragement needed for the special cases.

E.1.6 Other Factors Affecting Research

An evaluation of the relevance of the patent system, as an incentive to research and invention, should take into consideration the fact that only some of the research done in Canada is related to the profit motive. This factor was referred to in the Cambridge Report as well (supra, p 35).

According to data reproduced in the Science Council's Report No. 4 --"Toward a National Science Policy for Canada"--(table 2, p 34) industry funds financed less than 40% of the research being carried on in Canada. More recent data for the year 1971 taken from Statistics Canada information by the Ministry of State for Science and Technology (G. Dines January 12, 1975) is set out in table 3.

These more recent figures indicate that the contribution of industry to research carried out in Canada represents less than 35% of the total expenditures. The Senate Report on Science Policy contains similar figures for the years 1957-67, ranging from 24.1% to 33.5% (volume 1, table 6, p 130). Obviously research in Canada would not come to a halt if the Canadian patent system ceased to exist. At least those sectors which are not profit-oriented, namely those other than industry, would continue to fund research.

Neither would it seem reasonable to predict that all the research efforts of industry would automatically collapse. Even the most enthusiastic proponents of the patent system as a mechanism for

encouraging research would concede that other factors would continue to motivate the greater part if, not all, of the research which is sponsored by industry. This is in fact the conclusion reached in the Cambridge and Firestone surveys.

Table 3

TOTAL INVESTMENT IN R & D CANADA, 1971
(Compiled from Statistics Canada Data by MOSST, 1974)
Includes both Capital and Current Investment

SOURCES OF FUNDS	SECTOR OF PERFORMANCE			
	General Government	Industry	UNIV. & P.N.P	CANADA TOTAL
General Government	405	67	150	622
Industry	2	325	4	331
University	-	-	138	138
Private Non-Profit	-	-	22	22
Foreign	1	25	2	28
TOTAL	408	417	316	1,141

In any attempt to measure the impact of the Canadian patent system on research carried out in Canada, a further factor should also be considered. The present Canadian patent system does not contain any features which specifically encourage or ensure that research will be carried out in Canada. The law confers the benefit of patent rights on inventions indiscriminately, without any distinction as to the locale of research facilities. For the sake of argument, if it were assumed that no patent system existed in Canada and that the present law were then enacted, would there then be (apart from international effects which are considered later) any additional incentive for research to be carried out in Canada? Such an increase would not seem likely as the present law does not provide special benefits for research done inside Canada. Conversely, it would be unreasonable to argue that the abolition of Canadian patent rights would affect the degree to which research is carried out in Canada.

A conclusion along these lines was reached by the Economic Council in reviewing the impact of its proposals on the location of research activities. The report states (p 99):

"Research locations are typically chosen for reasons other than the level of patent protection, and these other reasons will continue to be the major influences on the amount of research done in Canada".

If the goal of simply encouraging the establishment of research activity in Canada is adopted, then devices other than the granting of patent rights should be adopted.

If the object is to provide a reward for successful research which leads to invention, irrespective of the locale of research facilities and irrespective of whether there is a need to provide an incentive to conduct research, then the patent system may be able to fulfill this rôle.

But the patent system should not be presumed to be the only economic instrument capable of achieving this goal. A system which might be able to accomplish this effect will be considered subsequently, after the worth of the patent system as an incentive to effect disclosure of inventions has been considered.

E.2 Worth of the Patent System As an Incentive to Disclosure

E.2.1 Effectiveness as an Incentive

The arguments on this issue, ie whether the patent system actually encourages the disclosure of inventions, may be briefly summarized as follows:

- (a) If an invention is inherently capable of being kept a secret, the patent system will not likely 'smoke it out' (ie the COCA COLA formula, which is still a trade secret).
- (b) If an invention is inevitably going to become known (or discernible through reverse engineering) when it is commercialized through sales to the public, then there is no need, other than arguments based on convenience, for a patent system to encourage disclosure.

There remains, however, the case of inventions which are made in the privacy of industrial laboratories, which would become known if commercialized, but which never become exploited.

The Economic Council did not focus on the precise issue of the extent to which the patent system can be justified as an incentive to disclosure alone. Reflecting on the incentive value of patent rights to encourage knowledge, production and innovation, the report states (p 34):

"The amount of incentive provided to knowledge production and information processing by the laws of intellectual and industrial property, as compared with the situation in their absence, is not a measurable quantity.

Clearly, however, it varies a great deal from case to case, depending on many factors. If an invention can easily be kept secret, patent protection will not have much effect on the incentive to produce it and may not indeed be sought."

and (p 39):

"The patent system encourages disclosure of inventions but does not guarantee it. Where secrecy can be made effective, an inventor may prefer its protection to that furnished by the patent system and may therefore neither patent nor disclose."

Of course, if we are evaluating the patent system from the view-point of its incentive effect prior to any decision having been made to go forward with commercial exploitation, then we should consider the uncertainties of the alternative secrecy route.

Secrets are notoriously hard to keep. Trade secret laws do exist, but they are uneven, vary from jurisdiction to jurisdiction and are always subject to the uncertainties of litigation. Even in the case of inventions which are difficult to detect or 'reverse-engineer', such as process inventions, the very knowledge that a secret invention is being applied or utilized is potentially capable of attracting and inducing competitors to apply sufficient resources to make independent conception probable. Faced with the possibility that a competitor may be able to acquire a valuable invention by independent conception, an industrialist may well elect for a fixed form of 'guaranteed' protection rather than rely on the secrecy route. Therefore the patent system may, in fact, in some cases be able to 'smoke out' some secret inventions.

Returning now to the case of inventions which would never become publicly available by reason of the inventor's lack of initiative or interest in commercializing his idea, the patent system may have some rôle to play. In the case of such inventions, there is the ever-present possibility that, while the originating research laboratory and its manufacturing affiliate see little prospect for practical exploitation of an invention in the near future, other competitors may see some worth in it and independently obtain a patent right for the same invention. This would block the original inventors from using their own inventions. It would also give competitors the marketing advantage of being the sole source for a new product.

The mere contingency of such an occurrence may result in the filing of many 'defensive' patent applications. Defensive patent applications may be understood to be applications filed for reasons other than an immediate interest in the exploitation of new technology. They may be directed to ensuring that the field is cleared for possible future use of a new invention. It is also said that some defensive applications are filed in order to suppress use by others or develop a negotiating provision to acquire licences under other patents. The Ilsley Report suggested that

the number of defensive applications filed in Canada was 'substantial' and quoted from Study No. 2 for the US Senate Subcommittee on Patents an estimate by George H. Frost that one third of all US applications are filed for defensive purposes (p 26).

In a footnote to the Firestone text the following quotation from statements by the New Jersey Patent Law Association in hearings before the US subcommittee on patents refers to defensive patenting situations in the US (p 227):

"Defensive patenting currently comprises a significant part of the burden on the operations of the Patent Office. No solution to the problem is yet seen because there is not yet evident, for a possible defensive applicant, a more convenient or less expensive technique for defending against possible future infringement charges. All is not bad, however, because defensive patenting brings many worthwhile disclosures to the public attention for promoting the progress of the arts."

Thus, it may be argued that the patent system through such defensive filings contributes significantly to the disclosure of otherwise 'lost' inventions.

A case can therefore probably be made for the argument that the patent system does encourage, to an extent that might not otherwise occur, disclosure of new inventions. The practice by larger corporations of maintaining in-house patent professionals to evaluate research and apply for patents must generate some degree of 'invention consciousness' that will result in the publication of data which would otherwise have been overlooked. But it should not be assumed that it is necessary to maintain patents in order to encourage disclosure of inventions. The Economic Council pointed out (p 38):

"there is no reason in principle why disclosure requirements cannot be attached to other incentive devices..."

In this respect, the inventors's certificate system deserves further examination.

E.2.2 Alternative Incentives to Research and Disclosure

E.2.2.1 Nature of Inventor's Certificates

There seems to be a recurring association in the literature between the inventor's certificate system and a socialist (as opposed to a free-enterprise) economy. The Cambridge Report referred to the inventor's certificate system in a footnote on page 26 as follows:

"Socialist countries have adopted the device of state awards for inventors, paid out of public funds and based on an assessment of the returns from the invention, up to a (fairly modest) fixed maximum. The inventions then become state property. As we shall argue later, this type of system is suitable only in an economy where decisions regarding the development and implementation of major inventions are in public hands." (see also pages 351-2 for further comments in this report on inventor's certificates)

While certain of the socialist countries do maintain both a patent and an inventor's certificate system, the latter device should not be assumed to be reserved to the private domain of the Socialist countries. If the goal of the patent system is to encourage research and disclosure of new inventions, then the inventor's certificate may be just the economic instrument to fill the bill.

Provisions for the granting of such certificates (called 'certificates of authorship') under the laws of the USSR were approved by the Supreme Soviet December 8, 1961 as follows:*

Article 110. The Certificate of
Authorship and the Patent

The author of an invention may, at his discretion, request either mere recognition of his authorship, or recognition of his authorship and also of his exclusive right in the invention. In the first case, a certificate of authorship is issued for the invention; in the second case, a patent. Certificates of authorship and patents shall be issued subject to the conditions and in accordance with the procedure laid down in the Law concerning Discoveries, Inventions, and Rationalization Proposals.

Article 111. Use of an Invention for which a
Certificate of Authorship has been Issued

Where a certificate of authorship has been issued in respect of an invention, the right to use the invention shall be vested in the state, which assumes the responsibility for realization of invention, having regard to the expediency of its utilization.

Cooperative and public organizations use inventions relating to their sphere of activity on equal terms with state organizations.

The author of an invention to whom a certificate of authorship has been issued shall be entitled, in the event of his invention being accepted for introduction

* Industrial Property - Oct. 1965.

to compensation commensurate with the saving or other positive result from its introduction, together with the privileges granted under the Statute on Discoveries, Inventions and Rationalization Proposals.

Under the "Statute on Discoveries, Inventions and Rationalization Proposals", (as decreed by the USSR Council of Ministers on August 21, 1973), section 97 requires enterprises which utilize an invention to inform the inventor so as to enable him to claim compensation.*

According to the UNCTAD report the following countries now maintain a system of this type (para 13, p 5): Algeria, Bulgaria, Czechoslovakia, German Democratic Republic, Poland, Roumania and the USSR. In all these cases, the inventor's certificate system is operated parallel to a more traditional patent system.

E.2.2.1.1 Contrast with Patent System

As will be seen from the foregoing passages, there are substantial similarities between an inventor's certificate system and a patent system in which compulsory licences are available for grant as a matter of right from the moment the patent is issued. As indicated earlier, one major difference is the fact that under a patent system, users must come forward and obtain a licence first, or be subject to sanctions for infringement. Under the inventor's certificate system, industry is entitled to apply the invention first, and then is obligated to inform of such use afterward.

A further difference arises from the fact that under the inventor's certificate system in these socialist countries which have them, the state pays the royalties. Under a patent system incorporating compulsory licences of right, royalties are paid by the user of the invention. Where licence royalties payable for use of a patented invention are substantial and must be borne by users of the invention rather than by the state, the royalty burden may deter users from adopting it.

E.2.2.1.2 Advantage of the Inventor's Certificate System

The inventor's certificate system is of interest because of proposals by some economists supporting a shift from the traditional form of patent system with its inherent element of private monopoly, to a system of issuing compulsory licences of right.

The inventor's certificate system has the distinction of possessing a separate identity and coherence as a philosophical concept. This feature is absent from compulsory licensing proposals which start with the premise that a patent right has been granted.

* Industrial Property, July 1974 p 298.

In its economic effects, the inventor's certificate as adopted in socialist countries avoids all of the dangers associated with providing an undue incentive to local manufacture or production, as canvassed by the Economic Council (supra pp 27-29). Apart from royalty costs there is no barrier to entering the market. On the other hand, there is no positive incentive to innovation.

While industrialists might still, under an inventor's certificate system, be attracted to adopting an invention, it would be on the basis of its own merits as a novel and useful product or manner of manufacture, rather than by reason of any incentive element associated with the inventor's certificate right.

E.2.2.2 A 'Modified' Inventor's Certificate System

It may be possible to adapt the inventor's certificate system to a free-enterprise economy by transferring the obligation to compensate the inventor from the state to the user. However, as indicated, along with this change a disincentive effect arises. The fact that a royalty has to be paid will depress the attractiveness of implementing the invention. Any royalty assumed by a manufacturer would have to be carried in the price of the product placing the manufacturer at a marketing disadvantage vis-à-vis the owner of the inventor's certificate.

It is possible that in some cases the obligation to pay a royalty might serve as an effective deterrent to use. Under these circumstances, the inventor would have the benefit of exclusivity in a manner similar to the one he would possess under a patent. In fact, by varying the rate of the royalty, a virtual continuum of degrees of protection could be created, until at some point, at a royalty rate of 10%, 20% or 50% of the retail sales price, a certificate-holder's rights would approach an absolute patent monopoly.

Thus, if concern of the Economic Council that the patent right "... (by) its ability to shelter domestic production from import competition may pose serious problems for efficient resource use" (p 49) is justified, then consideration could be given to adopting a variation of the inventor's certificate system for Canada. By setting royalties at a substantial but not excessively high level, all of the effects of the more traditional patent barrier would exist, but the monopoly would not be insurmountable. The mere threat of possible competition which is so efficient that it could potentially tolerate and absorb the fees owing to the certificate-holder, would deter investment in industry which is clearly inefficient and inappropriate for Canada. Where the royalty level is sufficiently high, sufficient protection for efficient Canadian production facilities would exist.

A certificate-holder would be able to 'license' the privilege of using the invention at a lower rate than the statutory level of compensation. An inventor holding such a certificate would be

able to sell it as a property having a value equivalent to its potential profits. Therefore, the certificate might be capable of playing a rôle substantially similar to the traditional patent right.

A further observation should be made about the possibilities of a modified inventor's certificate system. The differential impact of such a system on national versus foreign manufacturers should also be appreciated. As a tariff barrier, such a system would operate with differing degrees of effectiveness against foreign importers on the one hand, and potential domestic competitors on the other. The importers would be at a further disadvantage over domestic manufacturers by reason of the additional customs tariff burden that they would have to carry.

If it were considered desirable to ensure that such a system be economically neutral between importers and domestic competitors, a reduced royalty could be applied against importers to neutralize the tariff burden.*

Another variation might also be considered. If the goal were established to create a system which encourages:

- (1) research (leading to invention) and
- (2) disclosure of invention,

but without either positively encouraging or discouraging innovation based on invention, it might be possible to achieve this goal by introducing the equivalent to a patent pool arrangement.

Under the socialistic version of the inventor's certificate system, the state bears the costs of rewarding inventors. While the inventor is paid in proportion to the use of the invention, the users are not subject to any disadvantage by reason of adoption of the invention. A similar effect could be obtained under a free enterprise system without burdening the national revenue system of the state by establishing a pool or fund among industrial users for rewarding inventors. As long as contributions made by industrialists to such a pool are not directly proportional to actual use of a specific invention, no disincentive to adoption of an invention would be present under such a modified system.

* (While it may seem startling to make special provisions to accommodate foreigner competition, the rôle of the patent as a barrier to importation has been seriously questioned in considerations by the Andean group of countries respecting their patent law. In proposals for new industrial property laws made in December, 1971, "Decision 85", one suggestion made was to specifically limit the patent right to only restraining local manufacturing -- cf "Propuesta de la Junta relativa al reglamento para la aplicación de las normas sobre propiedad industrial, JUN, Propuesta 19/Mod, 17 December 1971, article 26 and the UNCTAD report para 291, p. 95).

Rather than have the state support the system for rewarding inventors, however, industrial users could be required, as a condition for participation, to pay a small percentage of gross revenue or net profits (perhaps reduced by a factor based upon their own research costs) into a fund. They would also be required to report on their use of inventions. Inventors would be entitled to their remuneration based upon such use, but the manufacturer who adopted an invention would not have any direct increased liability to the fund. Of course, the consumers would ultimately carry this cost.

Thus, it is possible to consider the construction of alternate systems, other than the granting of patent rights, capable of serving as an incentive for encouraging and rewarding research and disclosure.

Before leaving the topic of incentives to research and disclosure and continuing with the evaluation of the worth of the patent system under the third of the three categories being considered, ie, as an incentive to innovation, the effectiveness and worth of the disclosure element traditionally attached to the grant of a patent right will be examined. An understanding of the nature of patent disclosures is important to the overall evaluation of the patent system since these disclosures are said by some persons to constitute one of the main benefits which argue for the ultimate worth of maintaining a patent system.

E.2.3 Nature of Patent Disclosures

E.2.3.1 Historical Origin

The argument that the patent system can be justified on the basis that it serves as an incentive for the disclosure of new inventions has long been accepted by patent proponents as unquestioned. The major legal work on patents in Canada, "Canadian Patent Law and Practice", by Harold G. Fox, states (4th edition, p 163):

"The grant of a patent is in the nature of a bargain between the inventor on the one hand and the crown, representing the public, on the other hand. The consideration for the grant is double: first, there must be a new and useful invention, and secondly, the inventor must, in return for the grant of a patent, give to the public an adequate description of the invention with sufficiently complete and accurate details as will enable a workman, skilled in the art to which the invention relates, to construct or use that invention when the period of the monopoly has expired."

As Dr Fox points out, this was not part of the early British system of granting private monopolies under the crown prerogative. In fact, prior to 1712 there was no requirement that a patentee should at any time provide, for public examination, a description of his intended activity other than by way of a title. And even

after 1712, the procedure for obtaining a patent allowed that a specification or description be filed at any time up to six months following the grant of the patent.

Thus, early British patents were granted on the expectation that patentees would contribute to the benefit of the realm by establishing new trade within the land. Under Elizabeth I, grants of letters patent were often qualified by clauses requiring the introduction of industry within a fixed period*. In 1639, Charles I emphasized this policy by issuing a proclamation declaring all patented inventions not put into practice within three years to be cancelled.**

The transition in the justification for granting of British patents occurred some time in the eighteenth century, so that by the time of the case *Liardet vs Johnson**** in 1778, Lord Mansfield was able to lay down the principles for entitlement to a patent as follows:

"The general questions on patents are: 1st. Whether the invention were known and in use before the patent; 2nd. Whether the specification is sufficient to enable others to make it up; the meaning of the specification is, that others may be taught to do the thing for which the patent is granted, and if the specification is false the patent is void, for after the term the public ought to have the benefit of the discovery. Hence the law requires as the price the patentee must pay to the public for his monopoly that he should, to the very best of his knowledge, give the fullest and most sufficient description of all the particulars on which the effect depends."****

However, this policy with respect to the granting of patents was not a policy developed by the British Parliament. It was not until 1852 that legislation was actually passed in the United Kingdom governing the granting of patents and requiring that a provisional specification be filed at the time of application and that final specifications be published. (T.A. Blanco White, "Patents for Invention" 4th edition p 27.)

* cf E.W. Hulme "On Consideration of the Patent Grant, Past and Present" vol. 13, Law Quarterly Review)

** cf L. Getz, "History of the Patentee's Obligations in Great Britain" 46 Journal of the Patent Office Society 62 at 74.

*** 1 Webster's Patent Cases 53.

**** cf Getz p 80 (supra); see also E.W. Hulme, "History of the Patent Law in the Seventeenth to Eighteenth Centuries", vol. 18, Law Quarterly Review and "Privy Council Law and Practice of Letters Patent for Invention", vol. 33, Law Quarterly Review).

By way of contrast, Canadian legislation from 1869 to 1923 made the continuation of the patent right conditional on the establishment of facilities for working the invention in Canada. This obligation ceased to be sanctioned by automatic forfeiture in 1923, but was made subject to the alternative of compulsory licensing provisions with forfeiture being reserved to special cases at the Commissioner's discretion. By 1935, representatives of the patent bar were able to testify before a Senate committee reviewing the proposed revisions for the Act of 1935 that:

"(The inventor is deemed to have) performed his part of the contract when he discloses the invention so that it is available to the public".*

E.2.3.2 Present Disclosure Requirements

The present act and earlier Canadian laws have always required a description of an invention sufficient "to enable any person skilled in the art ... to make, construct, compound or use it." But the scope of this description must not be misunderstood. Its purpose is to clearly identify and delineate the nature of the invention. The disclosure demonstrates the invention; it does not and is not expected to teach the public how to exploit the invention commercially on a mass-assembly or production-line basis under optimum competitive conditions.

Dr Fox, in outlining the disclosure requirements for patents, adopts at page 167 the following passage by Lord Justice Lindley in *Edison and Swan Electric Co. v Holland***:

"In complying with the first conditions, ie in describing the nature of his invention, the patentee does all that is necessary, if he makes the nature of his invention plain to persons having a reasonably competent knowledge of the subject, although from want of skill they could not themselves practically carry out the invention. In complying with the second condition, ie in describing in what manner the invention is to be performed, the patentee does all that is necessary, if he makes it plain to persons having reasonable skill in doing such things as have to be done in order to work the patent, what they are to do in order to perform his invention".

* Hansard Feb. 27, 1935 pp 126-127 -- submission by G. Maybee before the Senate Standing Committee on Banking and Commerce, 6th session, 17th Parliament, 1935).

** (1889) 6 Reports of Patent Cases 243.

E.2.3.3 Importance of Knowhow

The adequacy of patent disclosures has received considerable attention in the US in the course of efforts at law reform there. In 1958, Machlup could state (Study No 15 p 32):

"... patent monopolies are often granted in exchange for incomplete disclosure ...

"Corwin Edwards for example writes:

'... So commonplace has inadequate disclosure become that the unpatented secret knowledge which is necessary to use a patent is colloquially called the knowhow and is generally regarded as property distinct from the patent to which it applies'."

This reference does not necessarily mean that such patents are invalid by reason of failure to make a complete disclosure. The disclosure may meet the requirements of the patent law. But the patentee may also know that a certain supplier of raw materials allows contaminants to creep in at times; or that timely and reliable service can be expected from others. He may have learned that at high production speeds special oils should be used as lubricants, or through production experience he may have developed useful jigs and handling procedures which significantly reduce production costs.

All these examples relate to the efficient commercialization of an invention. The knowhow involved need not be disclosed in the patent document, and any patent granted without disclosure of such information is not, under the present law, by that reason alone, invalid. It should not, therefore, be presumed that patent disclosures can realistically constitute an adequate vehicle for effecting the transfer of knowhow.

The realization that competitive exploitation of the new technology associated with inventions often requires extensive knowhow (in addition to the normal disclosure of a patent specification) has led to attempts to build into national patent laws the requirement that such knowhow be disclosed as well.

The original version of the US Senate Bill S-2504, (introduced (October 1, 1973) contained a provision (s 112(b)) requiring the patentee to upgrade his disclosure at the time of allowance, supplementing it with information respecting the "best mode or modes then available" regarding use of the invention. This was a downgraded version of provisions in an earlier bill, S-1321 (not passed) which required that (s 112(a)):

"The specification shall further include as a separate portion thereof, designated as such, a description of the best modes known or contemplated by the inventor and applicant of making, using, and commercially working the subject matter sought to be patented, together with all

the knowhow known to the inventor and applicant necessary or commercially requisite to make use, and work the same".

An example of one response submitted to the senate with respect to this earlier proposal (Senate Hearings, 11, 12 and 14, September 1973, p 619) is suggestive of the real importance of technical knowhow:

"This requirement evidently contemplates full disclosure of knowhow constituting valuable trade secrets. We have no doubt that many, if not most, applicants who are confronted with this costly--and perhaps competitively disastrous--possibility would choose secrecy rather than exposure. That is to say the patentable invention would not be patented but treated as a trade secret with a further restriction on use of the patent system and, of course, a corresponding reduction in public disclosure of new technology. Adoption of the requirements of this section, in conjunction with certain other provisions of S-1321 with which this statement is concerned, would tend, in our judgment, substantially to destroy the patent system as we have known it. We strongly oppose any such disclosure requirement".

This statement would appear to suggest that the retention of knowhow is more important than obtaining patent rights.

In a survey sponsored by the Patent, Trademark and Copyright Institute of George Washington University, as part of the "Patent Utilization Study", 600 patentees were canvassed for their views on the importance of knowhow. In answer to the question:

"If the sampled patent is or was used in production, is or was 'knowhow' an essential element in that production",

about one half of the patents were reported to require knowhow for practical application of the invention.*

The importance of knowhow has become increasingly recognized, to such an extent that the following observation has been made in the US in the Journal of the Patent Office Society (a long-standing and well-established forum for expression of opinion on the patent system by patent practitioners):

"The inclusion of patents in the grant... (of knowhow licences) has been much less important to both parties than the unpatented, secret technology. The patented

* (B.S. Saunders, J. Rossman and L.J. Harris, "Attitude of Assignees Toward Patented Inventions," IDEA, December 1958, pp 463-504).

technology is mentioned (generally in the form of a list of patents attached to the license) as a kind of make-weight".*

The British experience appears to be similar. In a preliminary review of the results of the University of Cambridge research project leading to the report, "The Economic Impact of the Patent System", one of the authors, C.T. Taylor, reported that the researchers were repeatedly told (Journal of the Chartered Institute of Patent Agents, April, 1973, p 302):

"the essential subject matter of licence agreements is almost invariably knowhow or other unpatented technical information; by comparison, patents are normally a minor adjunct to agreements, useful in mapping out the territory and giving a legal title to the information being exchanged, but seldom containing the essential information for working a new technique or process".

In this article C.T. Taylor indicates that over two thirds of the companies in the sample reported that most, or all of their patent licence agreements contained knowhow provisions. Most companies emphasized the knowhow content of agreements. A frequent response was:

"Although patents in themselves rarely contain the bulk of the essential information required for the effective operation of a new technique or a new plant, they do facilitate the transfer of such information through licensing..." (CIPA Journal p 305)

Whether the patent system should be maintained as a convenience to facilitate the execution of knowhow agreements is a question which will be considered subsequently.

This viewpoint, that patent disclosures are not equivalent to all the knowledge necessary to exploit an invention commercially, was confirmed in the final version of the Cambridge Report. The report states (p 95):

"..., it happens quite frequently that technical information which is essential to the most efficient operation of an invention on a large industrial scale is not divulged in a patent specification. This may be because the specification is drafted so as to avoid disclosing a vital piece of knowledge, or it may reflect the fact that the information is not known when the time for putting the specification into order is reached. In other cases the information is simply too cumbersome to put into a specification, as, for instance, when the

* (J.D. Becker, "Licencing in the Chemical Industry", 55 Journal of the Patent Office Society 759, at 769).

details of a process vary greatly with the local conditions under which it operates, the purpose for which it is used, etc."

E.2.3.4 Real Function of the Disclosure:

The UNCTAD report reviews, as well, the nature of the disclosure usually associated with patents (pp 100-102). In its review of references, this report cites one opinion on the modern function of the disclosure as follows (p 101):

"... its purpose is no longer to allow the exploitation of an invention by others or, as the economists say, to permit its imitation. Rather, today, it is the primary function of disclosure to supply the general public with a complete and exact survey of the most recent state of technological development, to provide the necessary information for continuing developments on the basis of the patented invention, and to direct those interested in the exploitation of an invention to the relevant source of technology".

(quoting F.K. Beir, "Future Problems of Patent Law" in International Review of Industrial Property and Copyright Law, vol 3, no. 4, 1972, p 448)

The report then concludes (p 102):

"309. It is clear that, even at the level described above, the disclosure contained in the patent documentation systems provides a tool for research and development and for the evaluation of new technologies, and valuable experience for the enterprises and government officials of the countries concerned, provided that access to such documentation can be facilitated.

"310. It is also clear that in the large number of cases in which necessary manufacturing knowhow is not disclosed by patents, effective transfer of technology can take place only with the voluntary cooperation of the patentee. This obviously diminishes the effectiveness of compulsory licensing as a means of encouraging use in production of patented inventions in the country granting the patent..."

E.2.3.5 Conclusion on Patent Disclosures

From the foregoing discussion it appears that, as an instrument for conveying all of the relevant information necessary to exploit an invention efficiently on a commercial scale, the classic patent disclosure is inadequate. This is not to say that the patent disclosure is useless or serves no function at all. Rather, patent disclosures should be understood as less than a complete basis for effecting an efficient transfer of technology.

While it may be fair to argue that the patent system does to some degree provide an effective incentive for the disclosure of new inventions, any cost-benefit analysis of the patent system should not stop at that point.

E.3 Worth of the Patent System As an Incentive to Innovation

If the patent system has but a very modest overall effect as an incentive to encourage research, and if the disclosure obtained from applicants through the patent system is, though useful, incomplete, then the question arises whether encouragement of research and disclosure alone is sufficient to support the existence of a patent system. As indicated earlier, provision could be made through a modified inventor's certificate system to provide some degree of incentive to research and disclosure, without resort to a system of granting private patent monopolies. It is, however, the completion of the innovation stage in the marketing of new products which is the ultimate object of traditional patent policy.* It is therefore essential that this stage be examined carefully in order to understand the relevance and worth of the patent system in relation to it.

E.3.1 Rôle of Patents in Supporting Innovation

There are risks inherent in the development of new technology which distinguish the process of innovation from normal competitive marketing.

The main element which places the innovation exercise in a special category, apart from 'normal' competitive production activities, is the presence of the factor of uncertainty. Ordinary competitive marketing is never a trouble-free exercise, but innovative marketing has special characteristics of its own.

The entrepreneurial path to developing and marketing a new product is an inherently risky one. With a new and untried product or process there is inevitable waste and expense before a final successful commercial operation is established. In pursuing the innovation process no one can foresee the numerous types of problems that may arise in adapting a new invention to a mass production system.

E.3.1.1 Traditional View

The traditional view of the rôle of the patent system has been to justify it, to some extent, in terms of neutralizing or cancelling some of the elements of uncertainty which bias persons against pursuit of the innovation exercise. As the Economic Council pointed out in its report, the patent system (p 46):

* cf Economic Council's report, pp 9 and 31.

"... is one of a variety of incentive devices used by governments to correct the situation in sectors of the economy where there is judged to be a tendency toward undercommitment of resources to knowledge production and innovation."

The patent system does not guarantee the success of a new product or process development. The risks of unforeseen expenses and possibly failure will always be present. But the exclusivity afforded by the patent right does remove one factor of uncertainty from the entrepreneur's calculations -- the possibility of being subject to ruthless and destructive competition at a stage before development costs have been recovered. In the wording of Scherer (as quoted by the Economic Council at p 75):

"The security of good patent protection makes up for the lack of security regarding those other factors upon which the company's day-to-day business success is based."

A key issue, therefore, is whether the removal of these elements through grant of a patent monopoly is likely to advance the prospects for the pursuit of the innovation process.

E.3.1.2 The Comparative Test

In analyzing the extent to which patents encourage innovation, care must be taken to distinguish whether it is the patent right which leads to the introduction of new products; or whether it is the pressures of competition which force industry to develop improvements and search for new products. Competition may, of itself, be a major incentive for industrialists to innovate. The same test can be applied in evaluating the patent right as an incentive or instrument to support innovation as proposed earlier (supra p 29) with respect to research leading to invention:

"Do patents induce persons to proceed into areas that they would not otherwise have entered?"

The test, with respect to the encouragement of innovation, is slightly different from that posed with respect to research.

Research necessarily proceeds in the dark, without any certainty of success or of the type of invention and patent rights that may be obtained. The exercise, when applied to innovation, proceeds on the basis of an ascertained invention and a reasonably predictable patent right.* But does the existence or prospect of a reasonably predictable right actually lead to greater innovation than would otherwise occur in its absence?

* (The patent right is not absolutely 'certain' because the application for grant may not yet have been approved. Even once granted the patent might still be revoked if subsequently found invalid).

E.3.1.3 Inherent Advantage of First Innovators

In reviewing the relevance of patents to the innovation process, the Senate committee observed (vol 2, p 556):

"Industry's purpose in funding R & D activities is to produce successful innovations and so gain benefits in the market place. The mere fact of being the first to introduce a new product or process gives a firm a certain lead time in which it can enjoy a profitable position on the market."

In an article by T.C. Taylor (one of the coauthors of the Cambridge Report), reproduced in the April 1973 edition of the CIPA Journal, the following observation is quoted (p 303):

"It is well known ... that lead-time on the more complex types of electronic capital goods is sufficiently long to provide a useful margin of market security for innovating firms in this field." (Citing C. Freeman, "Research and Development in Electronic Capital Goods", National Institute Economic Review number 34, November 1965, page 67).

This opinion is reiterated in the Cambridge text itself as follows (p 27):

"Where technology is moving rapidly and the life of new products or processes is short, the "head-start" obtainable by the inventor through these factors (retooling, modification of plant and equipment, etc) may be quite adequate to deter copyists, and patent protection may become a minor consideration - especially where industrial application of the invention is a relatively complicated matter".

These references suggest there is an inherent monopoly power available to an innovator for a limited period of time in any event, at least in the case of highly technical industries which are difficult to enter.

The inherent advantage accruing to the first innovator who introduces a new product into the marketplace may also be more significant today than it has been in the past. The relative barrier for competitors to enter the market will be higher in today's modern high-technology industries than previously existed in the earlier stages of industrialization when the technological content in manufactured articles was lower. Further, while a need for an extended pay-off period to enable an innovator to recover the once-and-for-all costs of innovation may once have existed, in the context of our modern mass-production and rapid-distribution economy, the necessary cost-recovery period for many modern innovations has been considerably shortened. To the extent that any inherent lead-time exceeds the pay-off period necessary to support industrial innovation, the introduction of a patent right would be redundant.

It is understandable that once a company has become established as the sole supplier in a market for a new product and is capable of maintaining production at competitive prices, many potential competitors may be reluctant to invest in the resources necessary to engage in competition. Therefore, for large-scale innovations, a degree of inherent protection already exists. If there is an inherent barrier for competitors to enter the market immediately in respect of large-scale innovations, then, applying the comparative or 'but for' test, the patent right appears to have relatively less importance as an incentive device.

The same thing cannot, however, be said about 'easy' innovations. In the case of new products or processes which can easily be introduced into the market with only a modest investment, very little inherent protection will exist. But the argument that there is a need for protection in order to recover high investment costs will also not be as strong in such cases.

E.3.1.4 Arguments Based on Need for Protection

Patent proponents argue for the indispensability of providing industry with incentive to innovate. Some even predict the collapse of industrial innovation in the absence of patent rights.

The Firestone Report quotes an executive of one of the major firms included in the in-depth interview survey as follows (footnote 31, p 21):

"If the patent system in Canada were weakened, the future of the Canadian economy would be endangered. American capital, instead of coming to Canada, would be invested in the United States and finished goods would be imported into Canada in increasing quantities. Not only would this mean a loss of jobs for Canadians, but it would further weaken Canada's precarious balance of payments ..."

These arguments may appear sound. On the other hand, they may reflect a desire to maintain the system rather than evidence that such a system is actually essential.

Businessmen may like to have patents available, because once they have a patent which covers their product line, it is likely to fend off or deflect competitors, contributes a reassuring sense of security and does in fact provide some degree of protection. It is understandable that businessmen may support an instrument which may tend to reduce potentially disruptive factors. But such a preference does not establish that the patent system is indispensable to support decisions to attempt to innovate, or even that it will have any substantive effect on such decisions.

E.3.1.5 Uncertainty of the Patent Right

The patent right, from the viewpoint of a businessman faced with a decision of whether to proceed into a new venture, must be discounted as an asset for guaranteeing success in the future.

Evaluated at the moment that the entrepreneurial decision to pursue a new venture is made, a patent cannot even qualify as a guaranteed protection against competition.

Any realistic patent lawyer will admit that virtually every patent granted, if pressed, is a ticket to litigation. If the patent is worth something, it is also worth opposing. Therefore when infringement occurs, compromise is the rule, rather than the exception. A patent is not an absolute guarantee of exclusivity.

An authoritative British author in the field of patents, T.A. Blanco-White, comments on the relative ineffectiveness of patents as follows ("Patents for Inventions", 3rd Edition, 1962, pp 7-8):

"In relation to major inventions it works well enough as a system for collecting and disseminating technical information, but as a system for encouraging the making and commercial use of inventions it is defective, and tends even to degenerate into a game of bluff, part of business politics rather than productive industry."

Any analysis of the patent system on the basis of its incentive value to innovation presumes that the monopoly power conferred will be considered valuable and that businessmen will weigh the potential monopoly power of a patent right when making business decisions. These arguments overlook another feature of the patent right -- its complexity. How many businessmen are prepared to rely on or give much credence to something they know they do not clearly understand? Even the most dramatic invention, when reduced to the jargon of the claimed monopoly becomes so hedged with qualifications as to be unreadable, except by experts.

Apart from potential competition, there are other important factors that will dominate the decisions of businessmen when deciding whether to risk investment in a new activity.

Pursuing the point of view of the sceptical businessman, the patent right might be likened to a coupon offered in a coffee jar at the supermarket. The coupon is a gratuitous bonus that one gets in purchasing coffee. It's something nice to have but if you didn't intend to buy coffee in the first place, then the prospect of finding a coupon under the lid isn't likely to induce a purchase.

To perfect the analogy, one would have to imagine a system by which a merchandiser includes a lottery ticket as the bonus element associated with the purchase of the brand or product being touted. Due to its litigious nature, the patent right bears many of the characteristics of a lottery ticket. Taking into consideration the uncertainties associated with acquiring a patent, the uncertainties of locating infringers, the uncertainties of litigation, and the inherent potential invalidity of patents, can we reasonably expect that the prospect of receiving such a lottery ticket is a significant incentive to inspire investment in development of any major innovation?

One of the businessmen canvassed by the Canadian Manufacturers' Association for the purpose of CMA's submission to the Economic Council is quoted in their submission as follows (CMC submission Appendix D, p 32):

"Our company is licensed under three Canadian patents and have started litigation against a competitor. This action was started about three years ago and we are not in court yet. If we had to depend on patents for our economic survival, we would have been bankrupted while a competitor secured the business. In the United States a firm was started up, made a fortune, and sold out before they could be prosecuted on patent infringement. My point is that patents do not provide immediate protection nor are they very respected by industry."

In judging the patent system on the basis of its incentive value to innovation any assumption that businessmen trust patents to be reliable and valid ignores the complex and litigious nature of patents. Scherer, in "Patents and the Corporation"*, summarizes his conclusions on the incentive value of patents as follows (p 150):

"The value of a patent as a stimulus to technical investment in large and well-established corporations is similar to their value to the independent inventor or to the small and struggling firm. As long as other factors such as distribution channels, relative costs of production, brand preference, and engineering knowhow are well established, patents are relegated to an unimportant niche in the decision-making process. But when corporations contemplate moving into areas where they have very little experience or market following, where they must in effect begin all over again just as the small company must begin, then patents can become an important factor. The security of good patent protection makes up for the lack of security regarding these other factors upon which the company's day-to-day business success is based".

This latter conclusion proceeds on the basis of "the security of good patent protection". By definition, such protection would be significant. But the incidence of "good protection" is a further factor to be considered in evaluating the worth of patents as an incentive to innovation.

Where does the truth of the purported value of patent right, as an incentive to innovation, therefore, lie?

* Published by 'Patents and the Corporation' Bedford, Mass, 1959.

E.3.1.6 Survey Results

The three surveys reviewed earlier in this paper, the Cambridge report, the Firestone survey and the work of Andrew H. Wilson for the Science Council, have explored this question. The results of these surveys, while not conclusive, indicate the direction in which further research might lead. The Cambridge study concluded (p 346):

"... the impact on the rate and direction of inventive and innovative activity undertaken by industry is extremely small in all areas (except the 'secondary' -- nonbasic -- chemical industries)." (quoted supra p 35).

The Firestone survey contains a tabulation based on the response to questionnaires mailed out (p 110). In answer to the question as to what extent the patent system was a factor in the decision to work the invention in Canada, the results for the three years surveyed (1957, 1960 and 1963) were as follows:

Significance of Canadian Patents For Inventions Worked in Canada

	(Number)	(%)
Little or no significance	1073	40.9
Fair significance	1208	46.0
Major significance	<u>344</u>	<u>13.1</u>
Total	<u>2625</u>	<u>100.0</u>

Similar figures based on the same data were set out in the report of the Economic Council in Table 4-7 (p 76).

Firestone interpreted the results of his survey on this aspect in the following manner (pp 320-1):

"7. In the light of the changing industrial structure, speedy technological progress and modern industrial organization, including the growing importance of multinational corporations, two of the great expectations that the patent system would encourage the independent inventor and facilitate industrial growth, do not appear to have been fully met. At the same time, some of the disadvantages of the system have become more pronounced, reducing competition in the domestic market, limiting exports of certain articles and facilitating increased foreign control of Canadian industry.

"8. This is not to deny that with all its shortcomings, the Canadian patent system still performs some useful functions, including the effect of public disclosure of technical progress, the encouragement to undertake additional R & D work in Canada, the manufacture in this

country of some patented articles that otherwise might be imported, and the development of new specialized industries in certain areas."

Andrew H. Wilson, the author of the Science Council study no. 11 "Background to Invention", as indicated in the passage quoted earlier (supra p 38), states that patents (p 39):

"... may play a larger part in the initiation of development work".

But the same author also states (p 41):

"No clear, unequivocal, or statistically supported case couched in terms of past, present, or future economic or industrial growth can be made from the material in this report ... (but) the industry representatives recommended that the system be retained".

This last observation, referring to "no clear, unequivocal, or statistically supported case" is reminiscent of the conclusion included by Fritz Machlup in his Study No. 15 for the US Senate. The Ilsley Commission itself adopted this same conclusion, quoting Machlup as follows (p 15):

"If we did not have a patent system it would be impossible, on the basis of our present knowledge of its economic consequences, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it."

It is a sad comment on the nature of our understanding of the patent system that it may still be necessary to rely on this argument in order to support the system's continued maintenance.

E.3.1.7 Other Considerations

The foregoing analysis concluded with the passage from the report of the Ilsley Commission quoting the conclusion of Machlup on the basis for maintaining the patent system. However, this excerpt does not complete the quotation as originally set forth in the Senate study.

In fact, Machlup in his study for the US Senate Subcommittee further qualified his conclusions by the following observation (p 80):

"This last statement refers to a country such as the United States of America -- not to a small country and not a predominantly nonindustrial country, where a different weight of argument might well suggest another conclusion."

Canada may well qualify as that "small country" to which this reservation was intended to apply.

More explicitly, the Cambridge Report, in commenting on the results of the Firestone survey as reflecting on the worth of maintaining a patent system, specifically singled out Canada as a case where the patent system may not be of the same relevance as in a fully industrialized country. The report concludes that (p 52):

"... (in Canada) some 94 per cent of patents are issued to foreigners, reflecting the dominant position of American-originating technology in Canadian industry. In this respect, Canada finds itself more in the position of a less-developed economy tending to import technology than of a highly industrialized economy like the UK, where 30 per cent of patents originate domestically. It is therefore very understandable that the patent system should be found on balance to operate against the interests of the Canadian economy -- tending to reduce competition, limit manufactured exports and facilitate foreign control of Canadian industry, while offering relatively little compensation in terms of faster technological progress".

This warning on the special nature of the Canadian situation is also found in the article by one of the authors, C.T. Taylor of "The Economic Impact of the Patent System", (April 1973, CIPA Journal-addendum).

These observations, based on viewing the patent system in its context in relation to the realities of the world as a whole suggest that Canada's relationship to the world patent system requires further careful consideration.

F. Canada's Membership in the International Patent System

F.1 Foreign Control of Patents in Canada

The Economic Council in its report set out statistics on Canadian patents issued over the years 1950, 1955 and 1960-69 (report, table 4-3, p 54). These figures show that the percentage of Canadian patents based on inventions of residents of Canada ranged

from 4.6% to 7.7%. Similar figures were cited in the report of the Ilsley Commission (p 14). The degree of participation of Canadian inventors in the Canadian patent system remains essentially the same today.

The Economic Council, on the basis of these figures and comparing them with similar statistics in other countries, was impressed with the fact that the Canadian patent system attracts "a proportionally heavier use (by foreigners) than foreigners make of any other patent system in the world" (p 54).

It should not be surprising, however, that many more patents are issued in Canada based on inventions by foreigners than by nationals. This feature is a consequence of the basic principle of the Paris Convention on Industrial Property to which Canada adheres. Article 2 of this convention requires that all member countries within the convention will refrain from treating foreigners differently from nationals. Foreigners are guaranteed 'national treatment'. This abstract equality, however, leads to dominance by foreigners in any local patent system.

It is typical of the patent systems of most all of the countries of the western world for foreign participation to exceed participation by nationals. Table 4 sets out statistics for 1973, based on information collected by the World Intellectual Property Organization (WIPO). Among market-economy countries, only the United States and Japan now have more than half of their patents issuing to nationals. The future will, however, reduce these figures. Theoretically, if all the world were to reach a stage of equivalent technological development, and if all people were equally inventive and patent-conscious, then national participation in local patent systems would be in proportion to the ratio of national-to-world population.

Still, the statistics for Canada suggest that Canada's situation, under present circumstances, is extreme. Canada is for foreigners an important market in which to obtain patents because Canada has both the foreign exchange and the appetite to qualify it as a substantial consumer of advanced technology. Canadian industry, as well, is sufficiently advanced to represent both a threat to exclusive world exploitation of new inventions and a substantial market for the sale of knowhow. It is therefore understandable that a large number of foreigners should seek to obtain patent rights in Canada.

Table 4

FOREIGN VERSUS NATIONAL PARTICIPATION IN VARIOUS
NATIONAL PATENT SYSTEMS

(Country)	(No. Patents)	(Percent to Nationals*)
1. Japan	42,328 2	73.1
2. United States	74,139 1	69.5
3. Germany - F.R.	23,934 5	46.8
4. France	27,939 4	38.1
5. Switzerland	13,680 8	28.9
6. United Kingdom	39,844 3	23.5
7. Spain	6,802	21.5
8. Austria	7,763	15.7
9. Belgium	15,633 7	7.8
10. Australia	11,670 9	6.5
11. Canada	21,246 6	5.7

(Source: WIPO doc IP/STAT/1973/1 December 1, 1974).

*includes nationals and/or residents.

From table 5, which shows the major patent filings made by nationals of several of the most industrialized countries of the western world, Canada's relative importance can be measured. The relative number of filings is limited of course by the factors of relative size of market, convenience of market exploitation, language barriers, and the costs and convenience of filing, but considering these factors, Canada is well up on the list of places to file for patent rights. It is understandable that due to the proximity of markets, filings in Canada by Americans should dominate those of other countries.

Table 5

Major Foreign Patent Filings for United States (US), Federal Republic of Germany (FGR), United Kingdom (UK) and Japan--1973

- Originating in -							
USA		FGR		UK		Japan	
- Filed in -							
1. Canada	16,234	France	8,612	USA	4,914	USA	8,565
2. UK	13,276	USA	8,603	FGR	3,576	FGR	4,962
3. Japan	12,828	UK	7,522	France	3,049	UK	4,289
4. FGR	11,794	Japan	5,594	Japan	2,508	France	3,071
5. France	9,991	Switzerland	4,500	Canada	1,835	Canada	1,925
		Canada	2,210				
		(10th)*					

* The number of foreign applications filed are in ranked order of magnitude.

(Source: WIPO doc IP/STAT/1973/1 December, 1974).

F.1.1 Costs of Foreign Participation

The extent to which foreign-based applicants secure patents in Canada is a measure of the cost to Canada of maintaining its membership in the international patent system. The Economic Council in its report concluded (p 49) that:

"It is in Canada's national interest to ensure that payments made to foreigners for the use of their patented ideas are no larger than the benefits received by Canadians ...".

The council also showed considerable anxiety (p 81) that Canada may, by granting rights to foreigners, be bearing more than her fair share of costs under the patent system. A rough measure of these costs may be obtained through figures available from Statistics Canada.

The 1972 CALURA returns (Corporation and Labour Unions Returns Act, Statistics Canada Cat. 61-210) list the various types of payments to nonresidents of Canada by Canadian industry. Extracts of information relating to royalty-type payments to nonresidents for patent, industrial design and trademark rights are set out in

table 6 of this paper. By way of comparison, according to the CALURA returns, copyright and other unspecified categories of royalty payments accounted for an additional \$83.4 million of payments to nonresidents in 1972.

Table 6

Major Royalty Payments to Nonresidents for Various Industrial Divisions--1972 - for Use of Industrial Property

Type of Payment	United States	Other Foreign	Foreign Total
	(\$ millions)		
Patents of invention	23.7	5.9	29.6
Industrial designs	46.9	2.4	49.3
Trademarks and tradenames	9.7	4.0	<u>13.7</u>
			92.6

(Copyright and other unspecified categories of royalty payments accounted for an additional \$83.4 million)

(Source: CALURA Report for 1972, Statistics Canada Catalogue 61-210 annual, table 17.)

In 1972, Statistics Canada analyzed (as part of its review of Canada's balance of payments) payments to nonresidents under international licensing agreements covering technological knowhow for the production of goods and services. ("Quarterly Estimates of the Canadian Balance of International Payments, third quarter, 1973", SC cat. 67-001 quarterly, pp 16-20). Six thousand firms were canvassed and a 90% response was obtained. Of those firms responding, 760 reported 3,417 agreements covering licensing of technology then in force.

The total payments to nonresidents on account of royalties under such technological knowhow agreements, including payments for patents and patent licences, was \$118 million. This figure is considerably in excess of the \$29.6 million figure reported under the CALURA returns for 1972 as having been paid as patent royalties. The contrast between these two figures clearly reflects the extent to which nonpatented knowhow is substantially more important in the use of advanced technology and represents the extent to which the transfer of technology is taking place independently of patents.

Apart from reporting on payments to nonresidents under the heading of patent royalties, the CALURA returns for 1972 also include the following figures on research expenditures:

Payments to nonresidents for:	\$ Millions
Scientific Research	25.6
Product and Process Development Research	51.7

The total for royalties under patents plus the above research payments, \$106.9 million, correspond fairly well to the total of \$118 million obtained by Statistics Canada on its technology-licensing survey. These figures again suggest that a substantial portion of Canada's international trade in technology is not patent-related.

Whatever the actual source of the final composite figure of \$118 million for payment to nonresidents on account of use of knowhow, it is clear that patents, and rights licensed under them, do not play as dominant a rôle in accounting for the costs to Canada of acquiring technology as may previously have been thought.

But accepting that the total payments to foreigners attributable to the patents are limited to the patent royalties reported in the CALURA returns (\$29.6 million), this is not a complete measure of the extent to which foreigners benefit under the Canada patent system. Many royalty payments made within Canada will be paid to foreign-owned subsidiaries. Some of this money then passes out of Canada under various designations other than patent royalties. Some may remain as further investments in Canadian industry, which however, will be equitably owned by foreigners.

Foreign patentees will recover a portion of the benefit of holding Canadian patent rights in the 'royalty component' of patented goods sold in Canada. Whether through actual royalties paid by licensees outside of Canada for the privilege of importing, or by way of monopoly profit on goods sold directly by the patentees, these additional costs to Canadians must be included in evaluating the costs of foreign participation in the Canadian patent system.

These are costs paid directly by Canadians as consumers of foreign imported products. There are also costs which are related to the structure and efficiency of Canadian industry.

Every patent issued presumably represents some advance or improvement in technology. Each patent gives its owner the potential to influence the extent to which Canadian manufacturers adopt the latest technology. Such patents may also be used to prevent not only Canadian consumers but also Canadian industry from shopping among various foreign sources for parts or components based on the patented invention that may improve the saleability of Canadian products. These are the basic rights essential to the character of the patent system that accrue to the patentee.

The owner of such patent rights may of course lift these prohibitions upon settlement of appropriate licence terms and may even be prepared to do so willingly in a large number of cases. Further,

compulsory licensing provisions offer an alternative to voluntary licences. But compulsory licence proceedings are litigious and uncertain. Further, a compulsory licence without access to related knowhow may be insufficient. Therefore, even in its qualified form, the patent right allows the owner a significant power to limit or influence the exploitation or adoption of new technology by industry in Canada.

Because of Canada's membership in the international patent system, in 95% of all cases Canadian patent rights are granted on the basis of inventions by foreigners. Therefore the Canadian patent system has the effect in the case of an overwhelming number of patented inventions of subjecting the adoption of new technology by Canadian industry to the discretionary influence of foreigners.

The relevance of this analysis is that control over the application in Canada of new, patent-related technology is, through the Canadian patent system, largely vested in foreigners. Statistics presented by the Economic Council in its report (table 4-4, p 63) based on the results of the Firestone survey indicated that of the inventions patented in Canada which are being worked somewhere in the world, in two cases out of three production is taking place outside of Canada. If these patents represent the most recent advances in new technology, then industrial workers and engineers outside Canada are obtaining the benefits of immediate exposure to the applications of new techniques notwithstanding the existence of compulsory licence provisions within the Canadian Patent Act.

This means that foreign industries and workers are, in the greater portion of cases, learning to apply new technology first. Not only does this mean that such foreign industries will be directly benefiting from the exploitation of new technology, but further, such industries will be in a better position to develop even newer more advanced technology ahead of Canadian industry.

While it may be unfair to describe the present world situation with respect to the exploitation of technology as one in which the "rich get richer and the poor get poorer", it may be possible that the nature of technology is such that the rich are getting richer faster.

In view of the foregoing, careful consideration should be given in restructuring the Canadian law to accommodate the presence of foreigners in the Canadian patent system in a manner which will best serve Canada's national interests. In establishing that accommodation under Canadian law, the relevance of Canadian patent rights to foreigners as an incentive instrument should be carefully considered.

F.2 Relevance of Canadian Patent Rights to Foreigners

The Economic Council voiced the opinion (p 84) that Canada ought to pay its fair share of the costs of developing world-wide invention and innovation. This is essentially an ethical conclusion and as such the issue is not a matter reserved to the domain of

economists. Canada is free to decide if it should, through the granting of patent rights to foreigners, make a contribution toward world research directed to producing inventions. Whether we do so is a matter for parliament to decide. Whether we should do so through the mechanism of granting private monopoly rights to foreigners does, however, introduce separate considerations of a clearly economic character.

There is an essential difference between considering the patent right as an 'incentive' or treating it as a 'reward'. To justify the granting of patent rights to foreigners based on the theory of an incentive, some change in performance or activity of benefit to Canada due to the grant would have to be shown. As a reward, such rights may be considered as a form of ex gratia payment. While the Canadian patent system may not operate as an incentive for foreigners to carry out research, to disclose or to innovate, it could still be serving to provide a reward. But it will do so only at the cost of importing all the disadvantages associated with monopoly rights.

F.2.2 As an Incentive to Research, Disclosure and Manufacture

Can it be said that the existence of the Canadian market as a potential territory for exclusive patent rights serves as an incentive to Canada's foreign applicants to carry out research or disclose inventions? In view of the relatively small size of the Canadian market, it is not very likely. As Edith Penrose states in her book "The Economics of the International Patent System" (p 113):

"... A single country would not in general be justified in assuming that merely because it granted patents on inventions developed in other countries, the effect would be such an appreciable stimulation of invention and innovation in foreign industries that imported goods would be cheaper or better than they otherwise would have been. The incentive effect on foreign industry of a monopoly in one additional market would usually be negligible. Hence, purely from the standpoint of its own economic benefit, a single country could conclude that it had nothing to gain and much to lose by including foreign inventions within the protection of its patent law, providing that the direct gain from granting foreign patents was the only consideration."

Based on purely economic considerations, research, disclosure and production by foreigners in foreign markets will likely continue irrespective of the disposition of rights under Canadian patent laws. On the other hand, Canada's contribution could be considered as a gesture in favour of international cooperation in the world-wide advancement of technology. The impact of such a gesture would transcend economic considerations and could only be evaluated at a political level.

F.2.3 As an Incentive to Marketing of Innovative Products in Canada

As indicated earlier, the risks and costs of innovation extend beyond the mere problems of establishing production techniques. They extend into developing the market through advertising and through the establishment of service outlets. Assuming that innovation abroad will occur in any event, the question then arises to what extent the Canadian patent system benefits consumers by encouraging the distribution of innovative products in Canada.

The Economic Council observed in its report (p 54) that rather than adopting a 'strong' patent system:

"It could more logically be argued that it is in Canada's self-interest to grant only enough protection as will ensure that useful new products and processes will be introduced to the Canadian market".

This statement suggests that the maintenance of the patent system could be justified in part on the basis that it may operate as an incentive to encourage the marketing in Canada of products made abroad.

If the patent is to be considered as an economic instrument to encourage the distribution of innovative products on the Canadian market, then a variation on the previous test can be applied:

Do patents induce persons to proceed into areas that would not otherwise have been entered (at least by someone)?

The exact answer to this question, as applied to the effect of the Canadian patent right to induce marketing of new products in Canada, is as difficult to determine as that to any of the previous questions which depend upon the incentive effect of the patent right. However, in the absence of a marketing initiative by the foreign patentee to import goods into Canada, Canada still has the capacity to develop and maintain its own marketing network for important new products.

Further, Canada is usually a secondary market. Market development costs for many inventions will be mainly met and absorbed in the course of servicing the primary market. Therefore a major part of the barrier to introduction of new products in such cases already will have been overcome.

The worth to Canada of maintaining the patent system on this count does not appear to be substantial.

F.2.4 Relevance of Patents to the Transfer of Technology

A further justification for maintaining a patent system having substantial foreign participation has more recently been offered. Recognizing that severe technological disparities exist between

various countries in different stages of industrialization, it has been argued that patents can serve as a useful vehicle for facilitating the transfer of technology.

This is not a recent basis for justifying the continued existence of patent systems. It is reflected in the original justification for granting patent rights, as put forth by the Crown of England in the seventeenth century. Patents were granted to encourage foreigners to move to England and establish new industries.

The argument proceeds today that, without the existence of local patent rights, industrialists and multinational enterprises from the major industrial countries would be reluctant to invest in or license their technology for use in other countries. The patent right, it is argued, provides an essential protection ancillary to the contractual rights which establish the terms upon which technology is to be transferred and without which such investments or transfers would not be made.

In the case of developing countries the problem of acquisition of technology transcends the patent system. In the words of the 1964 report prepared for the Secretary General by the Department of Economic and Social Affairs (ECOSOC):

"... the problems arising in connection with the transfer of technology to developing countries go much beyond the operation of national patent systems or the conduct of international patent relations... More could be done through the combination of appropriate legislative and administrative measures at the national level with action to curb restrictive business practices in international licensing agreements, and the provision of technical and financial assistance to developing countries..."

(cited in UNCTAD report, footnote 124, p 77).

Most of the developing countries lack the basic technological infrastructure which is essential for the adoption of many types of new technology. But these restraining factors are less present in Canada. Canadian industry has in most cases the technological capability to adopt new inventions as they arise. Is it possible, then, to argue that in Canada's circumstances the patent system is essential to ensure that the transfer of technology from foreigners to Canadians will take place?

Figures quoted earlier from Statistics Canada (supra p 66) showed that in 1972 Canadian corporations paid \$30 million to nonresidents on account of patent royalties. In the same year \$118 million was paid by Canadians to nonresidents under technological knowhow licensing agreements. Therefore, at least in Canada's case, it seems apparent that a substantial amount of technology is being transferred as part of transactions which may not involve patent rights.

Another factor may also be peculiar to Canada's circumstances. Knowhow is not necessarily something which must be purchased. Where an industry has a sufficient basic capability in a given field, the option would normally be open in adopting new technology to either buy the essential knowhow, or to generate it 'in house'. While the purchase of knowhow will often represent the more economical alternative, the patent system adds a further gloss to negotiations pertaining to the use of knowhow. As long as the potential licensor holds patent rights, the normal option of the potential licensee to choose between buying and generating knowhow will not exist. The patent system may, therefore, in the case of countries which are capable of generating essential knowhow, bias transactions toward the purchase of knowhow. At the very least, the existence of patent rights must colour any licences which are negotiated.

Whatever influences the existence of patent rights may have on the transfer of technology, this effect would likely be much less significant under Canadian circumstances than for other less developed countries which are members of the international patent system. In analyzing the ultimate relevance of the patent system to the transfer of technology, the final test is whether it facilitates a sufficient degree of increased transfer of technology to justify the costs of foreign participation. Those costs are the costs which Canada must pay in order to maintain its membership in the international patent system.

The benefits which may flow from such membership deserve separate consideration.

F.3 Exploitation of Foreign Patents Based on Canadian Inventions

The justification for Canada's continued membership in the international patent system will depend upon the extent to which Canadian industry benefits from the acquisition of foreign patent rights. This issue requires an understanding of the international patenting process.

F.3.1 Extent of Foreign Patenting

In order to understand the world patent system, it is not sufficient simply to count the total number of patents being granted or the number of patents being worked. Rather, the focus of attention should be the number and source of inventions being exploited around the world. Many patents may be issued in different countries for the same invention depending upon the extent to which a patentee decides to invest in foreign filings.

Table 5 (p 65) shows the major filing patterns for the most industrialized of the western developed countries. From this table one may be able to estimate the relative number of really important inventions that have been made in each of the originating countries listed. A similar table showing foreign patent filing statistics for inventions originating in Canada is included in table 7.

Table 7

Foreign Patent Filings for Inventions of Canadian Origin, 1973

Applications filed in the following countries	(number)
1. United States	2,095
2. United Kingdom	648
3. Japan	359
4. Australia	352
5. Germany - FR -	342

(Source: WIPO IP/STAT/1973/ 1 December, 1974 The criterion established by WIPO for the collection of statistics which led to the figures set out in table 7 requires reporting countries to identify the country of origin for the various numbers of patent applications reported. This criterion is interpreted by the Canadian Patent Office as the country of residence of the named inventor. Assuming that the other reporting countries listed in table 7 use the same definition, then the figures in table 7 may be accepted as reflecting applications for patents based on inventions made by inventors of Canadian residence.)

According to table 7, there were apparently 2,095 inventions made in Canada in the year 1973 for which it was worth seeking patent protection in the US market. It is not unrealistic to surmise that of the 648 applications filed in the next most important market, the UK, most of these inventions were represented among the applications filed in the USA. Thus, the applications filed in the UK, on this hypothesis, represent approximately the number of inventions worth filing for patent protection in at least two foreign countries.

On this basis, as one descends the list, one can estimate the relative number of hard-core, valuable inventions originating in Canada, which justify extensive filings abroad, ie approximately 350 inventions were worth filing in three or more foreign countries.

While it may appear that these figures do not represent a very substantial number of inventions, especially in comparison to the foreign filings by the other major countries included in table 5, these figures nevertheless constitute a rough measure of the relative importance to Canada of membership in the international patent system.

The cost to Canada of foreign participation in the Canadian patent system must be balanced against the benefit associated with the marketing power of these foreign patents obtained on the basis of Canadian inventions. While their number may be small, their value may be great. However, no survey has yet been carried out in Canada to determine the ultimate disposition and real impact of these foreign patents on Canadian industry.

Assuming that such foreign patent rights are being exploited for the benefit of Canadian industry, then all of the advantages of competition-free access to markets far larger than that available in Canada should be accruing. But it should not be automatically assumed that such foreign patent rights will necessarily be exploited with a view to advancing Canada's particular interests.

F.3.2 Relevance of Foreign Ownership of Canadian Enterprises

Canadian industry is characterized by an exceptional degree of foreign ownership. According to figures produced by Statistics Canada (cf Statistics Canada daily, April 21, 1975) the book value of total capital employed in Canada in nonfinancial industries subject to direct or indirect control by foreigners stood at the end of 1972 at \$35.6 billion (Cdn) out of a total employed capital of 105 billion. In other words, one third of all Canadian resources in the fields of manufacturing, transportation, merchandizing construction and extractive industries are either owned or controlled directly or indirectly, or supported by capital supplied by non-Canadians. In the manufacturing sector, less than 50% of the capital employed originates (and therefore subject to ultimate control) in Canada.

These figures on the extent of foreign ownership of Canadian industry constitute a separate factor for consideration in analyzing Canada's situation, quite apart from the extent to which Canadian patents are largely being granted to foreigners (on the basis of foreign-made inventions). While many countries will inevitably have to face the fact that foreign participation in their national patent system will increase relative to applications of local origin, the degree of foreign ownership of Canadian industry may introduce a unique constraint on the Canadian patent law.

While foreign ownership is not considered as necessarily bad per se, the Canadian government has indicated its concern with this situation. An indication of this concern may be obtained from a speech made by the Honourable Alastair Gillespie, Minister of Industry, Trade and Commerce, to a Seminar on "The Implications of Canada's Foreign Investment Review Act". This speech, made April 30, 1974, contains the following remarks:

"A fundamental Canadian economic objective is the development of a Canadian-controlled economy that is both innovative and internationally competitive -- an economy that fully utilizes our human and natural resources to our own economic benefit . . .

"Few Canadians would quarrel with the need to develop a more competitive, innovative and balanced economy. And not many would question the desirability of reducing our vulnerability to persons and events outside our border . . .

"Given the present degree of foreign control of the Canadian economy, it seems reasonable to insist that future foreign investment be to Canada's benefit as well as to the investor's benefit . . .

"We want to bring Canadians greater control over their own economy. We want to bring about a more rational and efficient Canadian economy. And, we want to be fair to the foreign investor . . .

"Canadians cannot do all the research and innovation required to be self-sufficient. We recognize the need for international specialization. We know that some foreign investment will continue to be vital to our development... But Canada has a uniquely high degree of foreign control . . .

"The government attaches great priority to ensuring that Canadians gain greater control of our own economic destiny. Various policy measures, introduced over the last few years, demonstrate clearly that we are moving along the road toward that objective."

The Foreign Investment Review Act is one manifestation of the government's policy with respect to foreign ownership of Canadian industry. Any revision of the Canadian patent law should also take the factor of foreign ownership of Canadian business enterprises into consideration.

F.3.2.1 Extent of Foreign Control of Canadian Inventions Patented Abroad

It should not be surprising, in view of the general foreign ownership feature of the Canadian economy, if it were found that a substantial portion of foreign patents based on Canadian inventions (inventions by Canadian nationals or residents) are owned or controlled by foreign-based enterprises.

The Firestone survey dealt extensively with the relationship between foreign ownership and the exploitation of patent rights under the Canadian patent system. It did not, however, produce figures of the extent to which foreign patent rights based on inventions by Canadians fall under the control of non-Canadian owners. The following question was asked as part of the survey (p 155):

- "How many patents did you obtain . . .
(a) in Canada; and
(b) abroad"

The survey results were summarized (p 158) as follows:

"In answer to the question about patenting abroad, most companies reported a significant increase in activity both in terms of the number of patents involved as well as in terms of the extension of coverage to many more countries. Data availability was limited in the case of foreign-controlled companies because most patents abroad were taken out by their parent or affiliated companies."

As a result, Firestone did not develop any conclusions about the extent of foreign ownership of foreign patents obtained on the basis of inventions by Canadian inventors.

An attempt may be made, however, to obtain an approximate estimate from other data gathered on the control of foreign patent rights arising from inventions of Canadian origin.

If we assume that Canadian inventors work indiscriminately for Canadian or foreign-controlled corporations, and if we recall that a substantial percentage of industry in Canada in the manufacturing sector is owned or controlled by nonresidents or foreigners (supra p 74), then it will be seen that only a portion of inventions made by Canadians necessarily comes within the control of Canadian corporations.

Patents may be granted on inventions made by Canadians, but these patents may then pass to or be owned by persons or corporations other than the inventor. These persons need not be Canadians, nor need these corporations be Canadian-owned or controlled. Thus referring to the 2,095 applications of Canadian origin which, according to table 7, were filed in the US in 1973, a significant portion must be subject to ultimate control arising outside of Canada.

Further, not all applications result in the grant of patent rights. Rather, WIPO's statistics for 1973 indicate that only 1,345 US patents based on inventions of Canadian origin were granted in that year.* If we accept the ratio appearing in table 7 (supra p 73) of foreign to US filings and assume that half of the inventions made by Canadians accrue to the benefit of foreigners (half of the manufacturing sector is foreign owned and controlled, supra p 74) then only about one sixth of the inventions (applications) made by Canadians are worth filing in three or more foreign countries. In other words only about 100 inventions worth extensive international patent protection accrued to the benefit of Canadian-controlled industry in 1973.

* WIPO Document IP/STAT/1973/1 December, 1974. The figures for both filings and grants in the US for inventions of Canadian origin have been fairly consistent in recent years, ie 1971 - 2025 filed, 1327 granted; 1972 - 1966 filed; 1244 granted.

This situation could be even more extreme if foreign-controlled industries had a greater propensity than Canadian industries to obtain control over inventions or to file for foreign or world patent rights.

A further indication of the extent to which this situation really exists may be extrapolated from other data. In the 1972 Biennial Survey of research and development activities within Canadian industry, Statistics Canada canvassed the activities of 187 corporations. These corporations included the 100 most active companies from the 1971 survey and had accounted for 79% of total R & D expenditures in 1971.

Included in this survey were questions relating to the number of Canadian and foreign patents obtained by each corporation. A breakdown of the results is tabulated in Table 8.

Table 8
Patents Received, by Ownership, 1972
(Statistics Canada -- 1972 Biennial Survey)

Ownership Group	Canadian Patent & Research	Foreign Patent & Canadian Research	Canadian Patent & Foreign Research	Percentage of Com- panies in Ownership Group
number of patents received				
(1) Industrial associa- tions, research institutes and Crown corporations	11	83	-	4
(2) Companies controlled by corporations or individuals of the U.S.A.	199	243	214	45
(3) Companies controlled by other foreign interests	32	37	84	12
(4) Canadian-controlled companies	298	287	247	39
Total . . .	540	650	545	100

Note: This table for 187 respondent companies only.

As was indicated in the summary included by Statistics Canada (p 18), the above figures represent patenting activities by the 187 corporations included in the survey. These corporations included the top 100 making R & D expenditures in 1971. Patenting activities carried out in 1972 by other firms that do not perform or purchase R & D are not included in the survey.

Nevertheless, the results of this survey are a direct indication of the fact that a substantial number of foreign patents based on Canadian research, while ostensibly held by companies situated in Canada, are ultimately subject to control by foreigners. Of the 650 foreign patents acquired by the corporations sampled, 260 or 40% accrued to the benefit of foreigners.

The survey of international licencing agreements carried out by Statistics Canada in 1972 provides further evidence that Canadians, in fact, control only a minor portion of the Canadian originating technology abroad.*

According to the results of this survey, of the \$7.1 million received in Canada as royalty payments for the use of technological knowhow in 1972, only \$1.7 million or 23.6% of this money actually passed to enterprises controlled within Canada. In other words three quarters of foreign royalty revenue of this type, while received by corporations situated in Canada, in fact accrued to the benefit of foreigners.

Whatever the exact proportions, there can be little doubt that the unique circumstances of foreign ownership in Canada affects the control of patent rights acquired abroad on the basis of Canadian inventions. This situation may appear unsettling, but it is not necessarily undesirable. The fact that a significant proportion of foreign patent applications of Canadian origin may be controlled by corporations in Canada which are extensions of multinational enterprises does not necessarily mean that those foreign applications cannot still serve Canadian interests. If the decision is made by such patentees to use the exclusive access to foreign markets created by patents as an opportunity to establish innovative Canadian production facilities, then Canada will benefit. But if the multinationals controlling these patent rights decide to rationalize their world production structure by locating manufacturing facilities elsewhere, then the assumed benefit to Canada of membership in the international patent system deserves careful reevaluation.

* (cf Quarterly Estimates of the Canadian Balance of International Payments, third quarter, 1973, p 20, Statistics Canada catalogue 67-001 Quarterly)

F.3.2.2 Exploitation of Patent Rights by Canadian Subsidiaries of Multinational Enterprises

The question then arises as to the primary interests and objectives of multinational enterprises in the exploitation of advanced technology. As observed in the Gray report, "Foreign Direct Investment in Canada" (p 133):

"In the case of proprietary technology, it has been pointed out that the interests of the proprietor need not coincide with Canada's".

That report concluded by proposing the establishment of a review agency to bargain for the importation of foreign technology and for the location of research development and innovative activities in Canada. Further consideration of this issue in respect to the exploitation of foreign patents is therefore justified.

The patent-related activities of foreign-controlled enterprises was examined extensively in the Firestone report. That work recommended incorporating into Canadian law information-gathering provisions regarding the activities of foreign subsidiaries in order to (p 266):

"... facilitate government efforts to encourage foreign-controlled companies operating in Canada holding Canadian patents to use them in their own as well as Canada's best interest."

By way of example of activities of multinationals which may not be in Canada's best interests, the Firestone survey inquired:

"... are some of the patents which you use subject to licence agreements with provisions regarding your ability to export to other markets?"

The data tabulated indicated the following results (p 153):

"In 85 per cent of the cases, export limitations were attached to patents licensed in Canada, 24.1% in most cases and 60.9% in some cases (on the basis of gross sales, see below)

EXPORT LIMITATIONS ATTACHED TO PATENTS CANADA	NUMBER OF FIRMS	GROSS SALES	EXPORTS
		\$ Mill.	\$Mill.
Yes, in most cases	4	1,131	132
Yes, in some cases	7	2,853	310
No	<u>4</u>	<u>705</u>	<u>77</u>
Total	15	4,689	519"

A further indication of the extent to which Canadian industry may be placed at a disadvantage in the rôle of licensee is the extent to which such firms have been obligated to grant back to foreigners rights in any improvements made in the course of applying licensed technology in Canada. According to the 1972 Statistics Canada survey on International Licensing Agreements (SC cat. 67-001, third quarter, 1973, p 17), out of 3,417 licences reported 788 included terms vesting rights in improvements in the (nonresident) licensor.

These figures apply to licences presumably in many cases between arms-length parties. In how many cases are export opportunities for Canadian subsidiaries of multinational enterprises circumscribed by limitations in their right to exploit foreign patent rights arising through an informal decision or directive from the controlling parent?

This situation may even exist where the Canadian subsidiary is not permitted to exploit a Canadian invention. The Firestone Report observed in summary (p 212) that:

"9. A number of foreign subsidiaries operating in Canada are required to turn over any inventions they may make to their parent companies for patenting and utilization outside Canada. This reduces Canada's ability to compete in export markets."

The policies of international corporations from the viewpoint of the exploitation of technology was explored in Background Study No. 22 for the Science Council of Canada, "The Multinational Firm, Foreign Direct Investment and Canadian Science Policy", by Arthur J. Cordell. This report, based on a study of 50 firms in Canada and representative head offices in USA, UK and Europe, opens its analysis on the fate of subsidiaries in the total research-innovation process as follows (p 42):

"... To understand the rôle of research and development in the subsidiary, one must always remember that it is but one part of an international firm whose activities may be North American, North Atlantic or worldwide. The rôle of R & D and the capacity for innovation are determined in almost every case by the organizational model chosen for the total firm and the extent to which North American operations are rationalized.

"In the total mix of activities which are undertaken by an international firm, some are centralized and other are decentralized. Some operations lend themselves to tighter control than others. Over two years ago, in a speech to the American Chamber of Commerce in the Netherlands, Jacques Maisonrouge, the president of IBM World Trade, concluded:

'It is simply not possible for the multinational company to be completely centralized or completely decentralized. There must be different levels of

centralization - all these will vary with different functions. In general, I believe that long range planning, finance, research and development could be centralized from a management viewpoint--but on the basis of worldwide input of data. On the other hand, sales, service, personnel, public relations--all that are most concerned with the outside world --should be decentralized ...'" (Emphasis added).

While perhaps not yet the rule, the tendency to rationalize research and development by centralization may be the trend for the future. To the extent that such centralization occurs outside Canada, Canadian production facilities which are subject to foreign control may be permanently limited to second-stage or delayed adoption of new technology.

Commenting on the exploitation of foreign markets, the study by Cordell states (p 56) that:

"... for a large percentage of subsidiaries in Canada, there is no attempt made to innovate and dynamically use the new product or process to secure a position abroad."

and at page 57:

"... Thus, in no case did we find a Canadian subsidiary that felt it had the freedom to enter foreign markets at will with a product which it thought could be produced in Canada and competitively exported. And, alternatively, we found only one instance of a process innovation developed in a subsidiary where the technology was, or could be licensed by the subsidiary to a non-affiliate anywhere in the world. This is not to say that such activity on the part of subsidiaries never takes place; it is just that our study found negligible evidence of such activity."*

The implications from this are clear. Canadian subsidiaries of MNE's are potential captives of their foreign parents, insofar as the international exploitation of inventions and innovative technology is concerned.

Reviewing the potential for harm that can arise out of these circumstances, the conclusions of Firestone appear appropriate (p 239):

* "(One subsidiary of an international oil company licenses product technology to a non-affiliate company in the United States. However, we were unable to determine the conditions surrounding the licensing procedure: Did the subsidiary have to obtain prior permission to enter negotiations? Did the subsidiary or headquarters negotiate the terms of the agreement?)"

"Thus, while the patent system is one of the means of strengthening the grip of foreign investors on the Canadian economy, it should not be blamed as a major factor contributing to the present dominance of Canadian industry and natural resources by foreign interests.

"Hence, amendments to the Canadian Patent Act should not be guided by anti-nonresident sentiments but by considerations of maximizing national welfare. This involves increasing the effectiveness and the equity of the patent system to serve all those who innovate or propose to innovate in Canada."

Having reviewed some of the facets of Canada's membership in the international patent system, the ultimate need for Canada to remain as part of the world patent system will now be considered.

F.4 Rationale for Remaining in the International Patent System

The Economic Council in concluding that Canada should retain a patent system, gave as one reason the following explanation (pp 82-83):

"... for Canada to go it alone, completely outside the international patent system, in a world where most of the economically larger countries with whom she does business remain strongly committed to the maintenance of such a system, would almost certainly give rise to great diplomatic and other pressures and retaliations. The most damaging of these might be actions which denied Canada access to valuable knowledge that was previously available to her and that could only be reproduced domestically at disproportionate cost."

This concern appears based on the supposition that it is not possible to be a member of the international community or the Paris union without maintaining a traditional type of patent system.

Technically, the Paris Convention does not require that Canada maintain a patent system at all. Rather, the convention requires that Canada treat foreigners on the same basis as it treats its own nationals. In fact, at the end of the nineteenth century there were two countries in Europe which, notwithstanding their membership in the convention, did not maintain a patent system or had a substantially truncated one. Those two countries were Switzerland until 1887 in full and 1907 in part, and the Netherlands from 1869 to 1912.

The Dutch expressly repealed their patent law in 1869, at the height of the controversy over the value of patents which raged through Europe prior to the formation of the Paris union. From its inception, the Paris Union has rejected the principle of reciprocity in preference for the doctrine of national treatment. However, this has not prevented the application of some pressures. At the Conference of 1883, the Dutch delegate was told that he

came from a country of "brigands".* Three years later at the 1886 Conference the French delegate, perhaps in an effort to influence the Dutch, attempted to introduce a provision of reciprocity into the union. It was not adopted by a binding resolution, but recorded as a "voeu émis par la conférence". In response the Dutch delegate then declared with authority from his government that they would introduce legislation on patents in the not-too-distant future ("à une époque pas trop éloignée"). However, the Dutch did not get around to adopting their new law until 1912.

The Swiss had never had a patent system prior to joining the Paris Convention. However, having joined the union, attempts were made to introduce a patent law.

It was felt that under the Swiss Constitution a plebiscite was essential. Four plebiscites were held, in 1866, 1882, 1887 and 1905. Neither of the first two approved adoption of a patent system. However, a system restricted to mechanical models was adopted in 1887. It was not until the last referendum in 1905 that the way was cleared for the introduction of a complete patent law extending protection to chemical inventions. Due to the extreme success of the Swiss chemical industry from about 1888 onward, Switzerland was by then under pressure from Germany to introduce protection for this new, emerging industry.

Eric Schiff in his text "Industrialization Without National Patents" was unable to detect any significant change in the rate at which applications by Swiss nationals were filed in foreign countries after the introduction of the patent system by Switzerland.

From his overall review, Schiff concludes (p 122) that it is safe to infer that the industrialization of a country can proceed smoothly and vigorously without a national patent system. Ethical considerations may, however, amount to significant political pressure. In fact, he suggests that had these two countries persisted without a patent system, the international union might either have sacrificed its basic principle of unconditional national treatment, or permitted members to impose some minimum standards of reciprocity on nonconforming members.

On the basis of the Swiss and Dutch experience, and even on the basis of Schiff's hypothesis that reciprocity might be raised in the event that Canada completely abandoned its patent system, the suggestion by the Economic Council that retaliation might rise to the level of denying Canada access to valuable knowledge should be discounted. The effects of such a shift in Canadian policy would probably be limited to the termination of the right of Canadian

* (cf "Industrialization Without National Patents" by Eric Schiff, Princeton University Press, 1971 p 78).

nationals to obtain patent protection in foreign countries. This would be a loss, directly or indirectly, to some 2,000 inventors of Canadian nationality whose inventions annually form the basis of applications for foreign patent rights. It would also mean a loss for Canadian industry of the opportunity to obtain temporary exclusive market control in potential export markets where patent rights would otherwise be available.

As long as there are no overt moves by foreign governments to forbid their nationals to transmit or exchange information with Canadians, the imagined injury suggested by the Economic Council, ie loss of access through the patent system to valuable knowledge, does not appear to be a real threat.

Patent disclosures are available for purchase by any person at patent offices throughout the world. (The Peoples' Republic of China, not a member of the Paris convention, has in the past consistently purchased blocks of Canadian patents through the Canadian Patent Office). But these disclosure documents can by no means qualify as production specifications. As indicated earlier, in order to establish a reasonably competitive manufacturing operation, a manufacturer must be prepared either to develop at his own expense and experience or purchase the requisite production knowhow.

It has been suggested that there is a widespread conviction among industrialists that the existence of patents greatly facilitates licensing of knowhow because it provides a form of legal security for the parties entering into contract. (See Cambridge report at pages 214-215). The Economic Council in its report acknowledged (p 46) that, as a secondary incentive, the patent system may serve the following ends:

- "1. the provision of market place for new technology;
2. the provision of a medium for the dissemination of technical knowledge ..."

Similarly Dale and Huntoon, in an article, "Cost-Benefit Study of Patent Systems"* conclude (p 383):

"The literature, although almost completely subjective, leaves little doubt that some guarantee of protection for industrial and intellectual property is necessary for international transfer of technology and investment".

This is not, however, an argument which necessarily leads to the conclusion that the patent system should be maintained. Rather, it is a commentary on the lack of confidence that such businessmen have with respect to the law of contracts and in respect of the

* Idea, Fall 1972.

law relating to the abuse of trade secrets and confidential information. This reservation would not seem to be as valid in Canada as it might be in other countries of the world.

Again, therefore, the possibility of abandoning the patent system in Canada cannot be rejected out of hand on the theory that it would limit Canadian access to knowledge.

If it is unlikely that Canada would enter into an era of information starvation as a result of moving to a position of departure from the traditional patent system, then grounds for retaining the patent system in Canada must therefore be founded on the assumption that the issuance of exclusive monopolies, on balance, makes a worthwhile contribution to Canadian industrial development and commerce. In striking this balance the overwhelming dominance of our patent system by foreign patentees must also be assessed.

The alternate rationale given by the Economic Council, that (p 83)

"... for all its social costs and uncertainties, the patent system does have the important virtue of allowing the market, rather than government officials, to pronounce the basic verdict on the relative value of different innovations".

is also one which should be taken into consideration. It is doubtful, however, whether this ground alone argues for the retention of some form of patent system.

Rather, the final decision as to whether Canada should continue to maintain a patent system of traditional form will depend on a better understanding of the balance of costs versus benefits inherent in the patent system. The costs will depend on the effects arising from the reward of a temporary monopoly which is an inherent part of the system. The benefits for Canada will hopefully be the advancements of research, disclosure and innovation and transfer of technology that would not otherwise occur.

G Summary to Part I

Part I of this working paper has surveyed in detail the rôle of the patent system and its relevance to Canada. As background, reference has been made to concurrent developments and to previous studies that have been carried out in other countries around the world. Generally these studies have accepted the continued maintenance of the patent system, proceeding on the premise that the patent system is justified by its effect in encouraging the development of new products and technology. However, these conclusions have been based on subjective evaluations rather than on detailed analysis.

The more extensive economic studies carried out within the Department of Applied Economics of Cambridge University and by O.J. Firestone for the Economic Council of Canada, provide a more

factual basis on which to question the justification for continued reliance on the patent system as an instrument of governmental industrial policy. Part I has attempted to review in detail the various issues involved in the question of whether it is in fact worthwhile for Canada to maintain any form of patent system. This discussion in part I will now be summarized.

G.1 Nature of the Patent Right

The essential characteristic of the patent law that distinguishes it from copyright law or from the system of inventors certificates used in some countries is the presence of the element of private monopoly. Monopolies have traditionally been found objectionable for a variety of reasons. From the consumer's viewpoint monopolies are bad because they lead to inflated prices. Businessmen who are excluded from a market through a monopolist's marketing power or by government-supported monopoly rights also have grounds for resenting the existence of monopolies. Economists have objected to monopolies primarily on the ground that they lead to a misallocation of resources and this in turn leads to a less-than-optimum production of those things which consumers and society aspire to enjoy.

The economist's analysis of the patent monopoly, as exemplified by the report of the Economic Council, identifies several types of costs associated with this system. Besides the misallocation-of-resources effects normally associated with monopoly positions in the marketplace, the costs of the patent system include the losses which arise through erroneous investment in inventions which turn out to be commercial failures; the costs of investment in Canadian production facilities which, once the barrier of patent protection expires, prove unviable in the international marketplace; and the corresponding losses attributable to opportunities foregone when limited Canadian resources have been diverted into unprofitable areas. A further cost inherent in the patent system is the delay which it necessarily imposes on the diffusion and adoption of new, more efficient technologies for producing goods.

G.2 Purpose of Granting Patents

The concept that inventors have an inherent property right in their inventions which may have had some currency in the nineteenth century, cannot be accepted as a basis for justifying continued maintenance of the patent system. If any inherent right exists, it is the right of industry to freely imitate competitors in satisfying the demands of the marketplace. Any justification of the patent system must be ultimately founded in its net social worth to society, balancing its costs and benefits.

Arguments in favour of maintenance of the patent system have generally been to the effect that its benefits are worth the costs. Various government committees have attempted to catalogue the benefits or objects which justify the maintenance of the patent system. For purposes of discussion, these benefits and

objects have been analyzed in terms of determining the extent to which the patent system may usefully benefit Canadian interests by serving as:

1. an incentive to research (leading to invention)
2. disclosure (of inventions), and
3. innovation (based on inventions).

Innovation, for the purposes of this discussion, has been distinguished from invention by defining it as the post invention phase which ultimately results in the introduction into the marketplace of new products or processes.

In analyzing the impact of the patent system on these activities, attention has been focused on its effectiveness as an incentive. The test to be applied in determining the efficacy of an incentive instrument is based on the increase or change in performance which results from the presence of the incentive device. Put succinctly, the test is the extent to which the benefits of the patent system would not arise, but for the existence of the patent right.

G.3 Incentive to Research

In analyzing the worth of the patent system as an incentive to research, reference has been made to the Cambridge study "Economic Impact of Patents" by Taylor and Silverston and the Canadian work by O.J. Firestone "The Economic Impact of Patents", as representative of two substantive attempts to study the performance of the patent system. In both cases, the researchers carrying out these studies received from industry an indication that the prospect of obtaining patent rights had little or limited effect on the decision in industry to pursue research. These conclusions are confirmed by two further studies, the "Patent Utilization Study" carried out by the Patent, Trademark and Copyright Institute of George Washington University, and by Study No 11 "Background to Invention" by Andrew H. Wilson, sponsored by the Science Council of Canada.

While these surveys were directed to the extent to which Canadian patent rights influence decisions in industry to undertake research, it has been further observed that less than 35% of the total investment in R & D in Canada currently originates from industry. Put conversely, 65% of investment in R & D in Canada arises from sources which are not affected by the profit motive. Accordingly, whatever effect patent rights may have as an incentive to research in Canada, their impact on the total volume of research being done must affect somewhat less than 35% of the actual research being done.

G.4 Incentive to Disclose

In considering the worth of the patent system as an incentive to disclosure of inventions, claims in this respect must be limited to commercial inventions which are not introduced into the market

but which, if so introduced, would likely be susceptible of imitation. It is unlikely that the incentive of a patent right limited in time would induce disclosure of inventions which are capable of being exploited as trade secrets. Conversely, if an invention were to become known through its commercialization, then the provision of patent rights as an incentive to disclosure would be redundant.

G.5 Alternate Incentives to Research and Disclosure

While claims might be made to support the continued maintenance of the patent system on the basis that it provides some incentive to research and disclosure, the working paper has indicated that alternative systems could be adopted which do not incorporate an element of private monopoly and which, accordingly, would avoid many of the costs identified by economists as being associated with the patent system. In this respect, inventor's certificates have been examined with a view to indicating that they may provide a realistic alternative to a patent system, assuming that the object of the patent system is to support research and disclosure of new inventions.

The biggest advantage of an inventor's certificate system would be the early availability of new inventions for use throughout Canadian industry. Rather than delaying the widespread adoption of new technology until the patent term expires, all Canadian manufacturers would be entitled to incorporate the latest industrial techniques into their production facilities immediately upon disclosure. For the person or enterprise which originates an inventive concept, a reward in the form of royalty payments proportional to the use of the invention by society-at-large would be granted.

The essential distinction between the patent and inventor's certificate systems is that the rôle of the inventor's certificate ends with the disclosure of inventions. Patents potentially may go further by encouraging actual commercial adoption of inventions. On the other hand, it is sometimes argued that the patent system can be justified on the basis that it encourages disclosure alone.

G.6 Nature of Patent Disclosures

The historical trend, by which the original concept of the patent right as an instrument for supporting the introduction of "new manner of manufacture" into the country became turned around until patents were justified in terms of reward for disclosure, has been outlined. The limited nature of patent disclosures and the commercial significance of undisclosed knowhow have also been reviewed.

It follows from this discussion that it is unrealistic to expect patent documents to disclose more than the basic idea of an invention. Nevertheless, a great deal of production expertise may be necessary in order to enter the market and compete efficiently in

the fields of new technology. This production expertise or know-how may either be purchased from competitors who have already established the production experience, or may be generated, at a cost, by any manufacturer having the technological capability. The need to make or buy technological knowhow may constitute a significant barrier for competitors who wish to enter a market for an innovative product which has become established, apart from the restraining effects of the patent system.

G.7 Incentive to Innovation

The traditional view of one of the major rôles of the patent system has been to justify it in terms of supporting the industrial innovation process. By removing, for a temporary period, the uncertainty associated with the competitive element and by holding out the possibility of substantial monopoly profits, it has been argued that the patent right significantly increases the extent of industrial innovation. Applying a performance test similar to that suggested earlier, the efficacy of the patent right in supporting innovation can be tested by asking the question: But for the existence of patent rights, would innovation likely have otherwise occurred?

In attempting to answer this question, a first observation made was that many innovations enjoy an inherent monopoly once they have established a head start due to the complex nature of initiating production in new fields. A further observation made reflected on the extent to which industrialists actually rely on patent rights in making entrepreneurial decisions.

Care should be taken to appreciate the viewpoint of industrialists who indicate that they would prefer to enter the innovation process with the protection of patent rights. Besides the fact that such a preference does not demonstrate the necessity for protection, the patent right, due to inherent uncertainties as to its validity and enforceability, is unlikely to be viewed as a reliable factor by investors contemplating an entrepreneurial decision. Therefore, the efficacy of the patent right as an incentive to innovation may be discounted somewhat further on this account.

The survey by Firestone indicated that in almost half the cases sampled, patent rights were of little or no significance for inventions worked in Canada. Only 13% of the firms reporting said that patent rights were of major significance. The Cambridge study, as well, concluded that the impact of the patent system on the rate and direction of innovative activity was generally extremely small.

It is difficult to see on the basis of this overall analysis, how any analyst could be content to retain the patent system simply because its inefficacy has not been clearly shown. Even allowing that the patent system may have some marginal influence on industrial activity, an influence which induces desirable results which would not otherwise occur, there must be weighed at the same time the costs of maintaining the patent system. These costs, in

Canada's case, include a further factor which is of overwhelming significance. That is the factor of foreign participation in the Canadian patent system and in the Canadian economy.

G.8 Foreign Participation

For many years the percentage of patents being granted in Canada on the basis of inventions made by foreigners has been about 95%. This degree of foreign domination is not surprising. It is inevitable that, for Canada, the greater part of technological advances will arise abroad and that patent filings will reflect this ratio. Eventually most countries will find themselves in a situation similar to that now faced by Canada. The problem is that, due to its small size but relative technological sophistication, Canada is today faced with overwhelming foreign participation in its patent system.

As a rough estimate of the costs of foreign participation, statistics show that approximately \$30 million a year passes out of Canada in the form of royalty payments to foreigners for use of patent rights. Other surveys have shown that the total payments to nonresidents, on account of use of technological knowhow, is about \$120 million. While payments for patent rights may represent a minor component of the total cost of acquiring technology from abroad, it is, nevertheless, a substantial cost. Furthermore, there are the costs to Canadian industry of being denied access to new technology in those cases where foreign industry prefers to supply the Canadian market with new products through importation rather than licensing the use of new technology in Canada; and as well, the costs to Canadian consumers of paying patent-protected prices for consumer goods.

While compulsory licensing provisions do provide a means for protecting a Canadian company which, by reason of competitive pressures desperately requires the right to adopt new technology in order to survive, there are major barriers which may inhibit widespread reliance on such provisions. Besides procedural barriers, a compulsory licence granted under the patent act will not confer on the licensee the benefits of the production know-how acquired by the patentee abroad. Such knowhow may be essential in order to place the Canadian licensee in a competitive position. Furthermore, there is no express provision in the law which guarantees to a compulsory licensee protection from vigorous price-cutting competition from the foreign patentee, once a compulsory licence has issued. It would not be unfair, therefore, to characterize the Canadian patent situation as one in which the bulk of new technology is only available to Canadian industry at the discretion of Canada's foreign competitors.

It is difficult to see how foreign participation can be counted as other than a cost under the Canadian patent system. A suggestion was made, however, by the Economic Council, that Canada should contribute its fair share toward the international costs of developing new inventions and innovations. If this suggestion is to be adopted, that contribution could be made through means other

than the granting of monopoly rights within Canada to foreigners. Again, the creation of a royalty right associated with use of an invention would accomplish this result without importing the costs associated with granting private monopoly rights to foreigners.

If the Canadian patent right is to be judged with respect to foreigners on the basis of its influence as an incentive device, clearly it is unrealistic to expect that such a right can have any influence on foreign inventors so far as encouraging them to carry on research, to disclose their inventions, or to introduce new products into the marketplace goes. Furthermore, while it may be convenient for foreigners to have the benefit of Canadian patent rights in establishing importation, distribution and servicing facilities in Canada for imported products, it is unlikely that, in the absence of patent rights, the supply of such goods to the Canadian market would significantly decrease.

The justification for Canada's continued membership and adherence to the patent portions of the Paris Convention can only arise out of the argument that the benefits to Canadian industry of obtaining patent rights abroad outweigh the costs of the overwhelming participation of foreigners in Canada's national patent system. While statistics suggest that as many as 2,000 applications based on inventions originating from Canadian inventors are currently being filed abroad each year, only about 350 inventions appear to be worth filing in three or more countries. Further, the extensive foreign ownership of Canadian industry argues for the possibility that only a minor proportion of such foreign patent rights are actually beneficially owned within Canada. In view of the propensity of multinational enterprises to rationalize production facilities, we have no assurance that Canada will be selected as the base for exploiting and supplying the world market with products based on inventions made by Canadians. A serious basis may therefore exist for questioning whether a net benefit really accrues to Canada by reason of its continued adherence to the Paris Convention.

Another factor arising from foreign control of Canadian patent rights is the extent to which terms extracted as a condition for the granting of licences may impair the activities of Canadian firms. Firestone tabulated statistics showing that export limitations are attached in some cases to the use of patent rights. In other cases, licensees are required to grant back to the foreign patentee any rights arising under new inventions that might be made by the licensee. These types of restraints are a clear loss to Canadian industry.

With these conclusions in mind the council's conclusion that Canada could not consider withdrawal from the international patent system has been questioned. Rather, the issue of whether Canada should continue to retain a patent system should be based on balancing the cost of maintaining such a system against the contribution which participation in such a system may make to Canadian industrial development.

H Conclusion to Part I

On the basis of the review and analysis contained in this first part of the working paper it is evident that Canada should give serious consideration to the possibility of abandoning the continued maintenance of a patent system in any form.

If the patent system as we know it, were, in fact, abandoned, Canada could alternately adopt a substitute system to provide a special incentive to industrial creators. One alternative could be something akin to the inventor's certificate model which essentially provides a royalty income to the inventors. On the other hand, it may be sufficient to rely on the direct rewards arising from the operation of the free enterprise competitive system as providing an ample incentive to encourage and foster invention and innovation.

Yet while there might appear to be a strong circumstantial case that would lead one to conclude that the Canadian patent system should be abolished, the case is not so overwhelming as to put the matter beyond a reasonable doubt. The paucity of conclusive data cannot be denied. What is required is a definitive analysis of the actual operation of the Canadian patent system.

With this object in mind the authors of this working paper have proceeded to draft a proposal for a new and substantially amended patent law. In those instances where the need for reform was apparent, appropriate changes have been made. In those other areas where the case was less clear-cut it is proposed that information be collected that will permit a more reasoned and factual evaluation of the impact of the patent system.

As an essential feature of this proposed revised law the Canadian patent system would be submitted to a ten-year trial period during which time the case for or against the system could be developed in a definitive and rational manner. At the end of the trial period, parliament would be able to debate the pros and cons of continuing the system, modifying or abandoning it on the basis of the data that will by then have been gathered.

To facilitate this review it is proposed that, subject to approval by order in council and the associated public scrutiny inherent in this political process, patentees would be required to supply such fundamental and essential information as they have in their possession which would reflect on the actual operation of the patent system in Canada.

The minister charged with the collection and analysis of this and other information during the ten-year period will be required to provide to parliament a report on his findings and relevant policy-legislative recommendations at the end of this term. A period of 10 years has been proposed as being long enough to permit accurate evaluation of the workings of the new patent act and at the same time not so excessively long as to permit undue prolongation of any potential abuses inherent in the patent system or in the revised law.

The essential factors that must ultimately be evaluated in determining whether the patent system should be continued include the extent to which the patent system actually performs as an incentive to research, disclosure and innovation; the costs entailed in the system, including costs arising through misallocation of resources and restraints on the use of new technology; and the ultimate impact and benefit to Canada arising from the participation of foreigners in our national patent system.

Under these general headings numerous other secondary questions arise -- the extent to which patents support licensing arrangements; the influence of foreign patent rights on the performance of Canadian industry; the extent to which foreign ownership affects the decisions of industry in Canada to exploit new technology -- questions which will only be answerable once detailed authoritative data have been collected. The feature which will distinguish the proposed ten-year review from previous studies of the patent system is that the review, apart from its scope and depth, will be based on a statutory responsibility on the part of patentees to supply the essential information. By cooperating fully in this exercise, industry will be able to supply the government with the data necessary to establish the ultimate worth of the patent system to Canada.

I.1 Summary of Major Issues

It is apparent from the analysis in part I of this working paper that no definitive conclusion on the worth of the patent system is yet possible. Therefore, a draft law has been prepared on the basis that Canada will continue in the near future to retain a traditional form of patent legislation. The draft law is traditional in the sense that it continues to rely for its economic effect on the incentive character of granting a private monopoly.

Before proceeding, however, with a detailed discussion of this proposed law, part II of this working paper reviews certain key policy proposals raised by the Economic Council of Canada and concludes with a critical analysis of various features of the present Canadian patent law which demonstrate the urgent need for reform.

The Economic Council in its report (p 84) established a list of specific criteria for the Canadian patent system. This list, which attempted to delineate the policy goals that should be pursued in redesigning the patent law for Canada, is briefly summarized as follows:

The Canadian patent system:

- (a) should encourage invention and other related activities,
- (b) should encourage efficient dissemination of technical information,
- (c) should facilitate making a "fair Canadian contribution" to the provision of incentives on a world scale,
- (d) should not be used to shelter inefficient Canadian production, and
- (e) should be administratively efficient and coordinated with related government innovation policies.

A copy of the full text of these criteria is included as appendix D to this paper.

The Economic Council also made a series of specific proposals concerning actual structure of the law (pp 87-108). These proposals touched on the following issues:

1. Administrative structure.
2. Timing of applications.
3. Grace period before filing.
4. The patent term.

5. Publication of applications.
6. Information about licences.
7. Renewal fees.
8. Import restrictions.
9. Relationship to competition policy.
10. General compulsory licensing,
11. Special compulsory licences for complementary technology.
12. Protection of computer programs.

In the preparation of the proposed law, close attention has been given to both the policy criteria and specific proposals developed by the Economic Council. Generally, the policies of the Economic Council have been followed and its proposals adopted. However, with respect to certain of the specific and most controversial aspects of the Economic Council's report, those suggestions have either not been followed or have been adopted with modifications. In order to develop a background for the policies actually applied in preparing the proposed patent law, the nature of those suggestions of the Economic Council which were the most controversial will now be examined.

The analysis of key issues raised by the council focuses on:

- (1) the policy of encouraging local working of inventions in Canada, including:
 - (a) the dangers,
 - (b) the potential benefits and
 - (c) means for encouraging local working;
- (2) the council's compulsory licensing proposals;
- (3) the council's policy on importation.

The discussion of the above issues is followed at the conclusion of this part by a further analysis demonstrating the present need for reform, broken down according to the various sections of the present act.

J Local Working

J.1 Encouragement of Local Working -- Potential Costs

The Economic Council left no doubt in its report that it considered the preferential encouragement of local working of patented inventions in Canada as an anathema to the healthy development of Canadian industry. The misallocative effects of granting patent

monopolies have been outlined earlier, in Part I, under the headings "Economic Inefficiency" (supra p 11) and "Economic Costs of Granting Patent Monopolies" (supra p 12). In listing its specific criteria for the Canadian patent system, the council's report warned that the patent system (p 84):

"...should not encourage, as it might if the working-in-Canada provisions of the existing Patent Act were vigorously enforced, a new proliferation of small-scale, high-cost manufacturing in Canada. Rather, it should help to promote the kind of internationally competitive pattern of secondary manufacturing that was envisaged in the "Scale and Specialization" chapter of the Economic Council's Fourth Annual Review. While working of foreign inventions in Canada is normally the most complete and effective means of technological transfer into Canada, it is achieved at too high a cost if it results in Canadian resources being used in productive ventures that can never aspire to exports and can only go on existing domestically behind an absolute patent barrier to imports. In such cases efforts should be concentrated on conveying knowledge of the relevant technology into Canada by other means, on a purely informational basis for the time being." (quoted supra p 28)

The council had earlier warned that (p 81):

"...cases have undoubtedly occurred where the working of patents in Canada has been high-cost working by international standards and consequently a poor use of Canadian productive resources. In other words, the system has operated in some instances as an absolute trade barrier, protecting inefficient Canadian production."

While these observations by the Economic Council were made without inclusion of actual data in support, the economic argument that monopoly breeds inefficiency clearly applies to patent monopolies insofar as in the absence of the pressures of competition, manufacturers have little incentive to reduce production costs and maximize output.

The Economic Council has further reiterated in its special 1975 report on trade policy, "Looking Outward"*, its concern with Canada's weak economic performance in the area of productivity growth and has warned of the serious risk that Canada's assets will be wasted through inefficient use (p 26). In that report the council was emphatic in its conclusion that the protectionist aspects of Canada's past commercial policies have contributed to a deterioration of this country's capacity for sustained, dynamic and autonomous growth (p 37).

* Information Canada, Catalogue No. EC 22-27, 1975.

To the extent that exclusive rights granted pursuant to the patent law tend to shelter Canadian industry from pressures of international competition, the patent system must be counted as operating to the detriment of Canada's overall economy. The inclusion of specific provisions in that patent law for specifically encouraging the local working of inventions must necessarily increase such costs.

On the other hand, the council's concern that patents may import these special costs into the economy must be balanced against the benefits which may flow from encouraging the working of inventions in Canada. These benefits were the original basis for granting patents and the local working of inventions has, in the past, always been recognized as a major objective of Canada's patent laws.

J.2 Encouragement of Local Working -- Potential Benefits

Canada adopted its policy of introducing 'new manner of manufacture' into the country with the implementation of Sir John A. Macdonald's national policy shortly after confederation. The goal then was to introduce new industry, irrespective of whether it represented new technology. The rule was 'industry for industry's sake', encouraging national manufacturing at virtually any cost, and this attitude has persisted in some quarters to a greater or lesser degree up until the present.

The Canadian patent law, created by the act of 1869, required a patentee to work his invention in Canada within two years from grant or forfeit his rights. It granted a right, but that right was conditioned on local working. Although Canada by 1923 had repealed the provisions in its patent law imposing automatic forfeiture for failure to work inventions locally, (replacing them with compulsory licensing provisions with a discretionary power in the Commissioner of Patents to revoke patents), Prime Minister Bennett was still able to state at the time of passage of the 1935 patent act:

"Section 65 is placed in this statute to ensure that Canadian workmen will be employed in the manufacture of patented articles under patents granted by... Canada."
(Hansard, June 4, 1935, p 3266).

Section 65 (now 67), forming part of the compulsory licensing provisions of the present patent act, provides as follows:

"67(3) For the purpose of determining whether there has been any abuse of the exclusive rights under a patent, it shall be taken... that patents for new inventions are granted not only to encourage invention but to secure that new inventions shall so far as possible be worked on a commercial scale in Canada without undue delay."

One hundred years ago Sir John A. Macdonald adopted a national policy of protectionism in order to support the development of industries in Canada. An unrestrained pursuit of a similar policy today is certainly not in the Canadian interest. Canada already has a substantial 'mix' of industries in virtually all fields and technologies. There are some gaps (such as those detailed by Pierre Bourgault in his Special Study No. 23 for the Science Council of Canada -- "Innovation and the Structure of Canadian Industry"). But the conversion of Canada from an essentially agricultural society to an industrial society has already taken place. Canada can no longer afford to pursue a policy of mercantilism.

Mercantilistic economic policies should, however, be distinguished from contemporary policies which are directed to encouraging indigenous technological innovation activity in Canada. The Economic Council in "Looking Outward" argued that the best interests of a developed country entering the postindustrial phase of its development lie in the exploitation of the comparative advantages inherent in having a highly educated labour force (pp 64-65, 133). The council particularly acknowledged the benefits arising from the exploitation of innovations and the opportunities which may arise out of developing technology-intensive industries (p 132).

The importance of stimulating technological innovation and exploiting recent scientific developments as a means of improving industrial performance is widely recognized. The Senate's report on science policy gives a succinct but exhaustive exposition of its views as to the goals which should be pursued through science and through the exploitation of technology (vol 2, pp 338-365 and 374-379). Their conclusion was that:

"... the promotion of technological innovation in manufacturing industry should become a major objective of government policy." (vol 2, p 486)

The government, in the February 27, 1974 speech from the throne, indicated, in part, its policy objectives in respect of supporting innovation in Canada as follows (Hansard, February 27, 1974, p 3):

"The development and use of technology is also essential to the Government's approach to increasing national economic production. Steps will be taken to obtain greater returns from industrial research and development as well as technological innovation in Canada.

Scientific knowledge and its application is a keystone to meeting the challenges facing Canada, including those in the area of food, energy or industrial development. The objective of the Government's science policy is the rational generation and acquisition of scientific knowledge and the planned use of science and technology in support of national goals."

This policy is not a recent trend within the Canadian government. In 1966, a statement made by the Honourable C.M. Drury, then Minister of Industry for Canada, to the Second Ministerial Meeting on Science of OECD, January 12-13, 1966, contained the following observations under the heading "Policy and Principle":

"Our basic premise is that technological investment is the great progenitor of economic growth. Technology enters the economy through the process of innovation which is one of the important driving forces of a modern industrial economy. The task facing governments then, is to stimulate the innovation process so as to ensure the rapid and effective exploitation of new scientific and technological advances. The solution involves the creation of a favourable climate for innovation and the devising of techniques to promote research and development in industry, where it can be applied for economic purposes."

and the further statement:

"In all cases, the primary objective is to introduce scientific knowledge and the associated technical skills into industry where they can be directly exploited for economic ends."

As a national goal, support of indigenous innovation should not be confused with the protectionist system established under Sir John A. Macdonald's national policy of 1879. Rather, the policy of encouraging Canadian industry to engage in innovation-oriented activities can be justified, in the special case of new technology, not on the basis of employing Canadians for employment's sake, but in order to ensure that Canadian industry will have the capacity to capitalize on future advances as they arise.

The key concept here is the development of a Canadian industrial capability to exploit new technology.

The encouragement of an indigenous technological capability in Canada should be recognized as a goal separate from that of encouraging innovation in Canada. These two objectives are, however, intimately related. As long as Canadian industry is not involved in the development of techniques for the exploitation of new technology, there will be little chance that Canadians will be responsible for substantial new advances. Exposure to background technology can be an important prerequisite to both the generation and adoption of new technology. Industrial experience in the exploitation of new technology can improve both Canada's technological absorptive capacity and, as well, the ability of Canadian industry to introduce its own innovations.

The Economic Council, in its Fifth Annual Review, outlined the importance to Canada of developing an indigenous technological capability.

The report states (p 54):

"In our view, no task may be more important for improving Canada's innovative performance than to strengthen the capabilities of Canadian management to understand and manage technological change and the innovative process."

and (p 55):

"We emphasize again, however, that improvements in information transfer must be coupled with a stronger capability on the part of Canadian management to understand, interpret, and apply such information. Economic benefits are measured, not in terms of information flows, but in terms of practical results achieved in production."

The report of the working group established by the Government of Canada under the Honourable Herb Gray, "Foreign Direct Investment in Canada" (published in 1972) concluded as follows (pp 132-3):

"A number of important conclusions emerge from these facts. Firstly, as a country likely to remain an important importer of technology, it is sensible to take special care in developing a strong capability in buying technology.

Secondly, several cogent reasons exist for further strengthening indigenous technological capacity; to reduce the proportion of output which is in truncated forms; to strengthen Canada's bargaining capacity in respect of imported technology; to help create the technological and entrepreneurial environment needed in Canada; and to help create the capacity to buy foreign technology."

Arguments have been raised against the development of an indigenous industrial structure which relies extensively on the economies of imitation.* But on the other hand, the realities of relative population and scale of investment dictate that Canadians could never hope to originate more than a very small percentage of the significant innovations arising continuously throughout the world.

Viewed from the basis of the overall impact that the patent law will have on Canadian industry, there are likely better prospects for benefits to Canada under a patent system which is conducive to

* cf Speech by Vernon Marquez, President of Northern Electric given at a conference sponsored jointly in 1969 by the Canadian Institute on Public Affairs and the CBC, published in "A Science Policy for Canada" by the Institute in 1970. Also, the Economic Council's Fifth Annual Review, p 56.

the early adoption by Canadian industry of new technology generated abroad than under a law which relies solely on encouraging original innovation. But whether the goal of a new Canadian patent law is focused on encouragement of original or adaptive innovation in Canada, both of these objectives require that Canadian industry should have the technological competence to apply new technology. Technological competence can best arise through direct and intimate involvement in the exploitation of the most advanced contemporary technology. Inventive or innovative creativity is more likely to arise in an industry which has had experience in the fields of existing technology.

An example of how creativity can arise out of continued exposure to background technology is the invention of the polaroid dry-film process by Dr. Edwin H. Land. In an article entitled "On Some Conditions for Scientific Profundity in Industrial Research"*, Doctor Land describes the original conception of this invention as follows (pp 9-10):

"I recall a sunny vacation day in Santa Fe, New Mexico, when my little daughter asked why she could not see at once the picture I had taken of her. As I walked around that charming town I undertook the task of solving the puzzle she had set me. Within the hour, the camera, the film, and the physical chemistry became so clear to me that with a great sense of excitement I hurried over to the place where Donald Brown, our patent attorney (in Santa Fe by coincidence) was staying, to describe to him in great detail a dry camera which would give a picture immediately after exposure.

"In my mind it was so nearly complete and so real that I spent several hours describing it, after which it was perhaps more real to him than even the ultimate reality. Only three years later, three years of the timeless intensive work referred to above, we gave to the Optical Society of America the full demonstration of the working system".

Dr. Land then continues, explaining how his previous years of experience in the field of polarized light had prepared him to instinctively comprehend and ultimately perfect the method by which the dry-film process could be created:

"What is hard to convey, in anything short of a thick book, is the years of rich experience that were compressed into those three years. It was as if all that we had done in learning to make polarizers, the knowledge of plastics, and the properties of viscous liquids, the preparation of microscopic crystals smaller than the wavelength of light, the laminating of plastic

* cf "Nurturing New Ideas, Legal Rights and Economic Roles", Bureau of National Affairs Inc., 1969.

sheets, living in the world of colloids in supersaturated solutions, had been a school and a preparation both for that first day in which I suddenly knew how to make a one-step dry photographic process and for the following three years in which we made the very vivid dream into a solid reality.

"Once again we can see the significance of environment, of a corporate life whose managerial center was concerned with scientific ideas, a corporate life in which everyone participated in the mastery, day by day, of the new technological problems that arose in our search for better polarizers and new ways of using them. The transfer from the field of polarized light to the field of photography was for us all a miraculous experience, as if we had entered a new country with a different language and different customs, only to find that we could speak the language at once and master the customs. In short, the kind of training we had given ourselves in the field of polarized light had endowed us with a competence we had not sought and did not know we had; namely, a competence to transfer what must be a common denominator in all honestly pursued research, from one field to an entirely different one."

These words, by a man who must be acknowledged throughout the world for his contribution in conceiving and developing the Polaroid-Land camera, speak eloquently of the relationship between intimate exposure to known technology and the seeds of creativity.

As suggested by the Economic Council in its Report on Intellectual and Industrial Property (p 5):

"Out of the present generation of technologically curious Canadian invention-users comes part of the next generation of Canadian inventors."

Paraphrasing this argument in terms of contemporary vernacular:

"You have to be where it is at in order to be able to follow where it is going."

It is against this background that the contribution of the patent system to the advancement of national technological capabilities should be evaluated.

If foreign patentees can be induced to share with Canadian industry the knowledge, skills and knowhow developed in the course of commercializing their inventions, then the chances will be improved for Canadians to be in a better position in the future to go forward with further advances on their own. By the early adoption and integration of new technology, Canadian industry will be in a better position to generate its own original innovations.

The proposed law, therefore, proceeds on the basis that, by encouraging the local working of inventions (preferably under licence to Canadian enterprises), Canadian industry will have an opportunity through increased exposure and experience with new technology to develop its technological capabilities.

The Economic Council conceded that the working of foreign inventions in Canada would normally be the most complete and effective means for transferring technology into Canada (p 84). However, the council also warned of the potential costs associated with encouraging such local working. Accordingly, while provisions for encouraging local working have been incorporated in the proposed law, two ancillary features have also been incorporated as essential and necessary adjuncts to the work-in-Canada features. The effects of the incentive to local working will be moderated by a relative shortening of the duration of patent protection and by the introduction of the concept of 'exhaustion'. Both of these features are discussed in detail subsequently (infra pp 206 and 141).

Provisions for encouraging the local working of patented inventions have been included in the proposed law in the hope that, properly moderated to avoid encouragement of inefficient Canadian industry, the proposed patent law can, on the balance, serve Canadian interests. The next issue for consideration is the best means for encouraging local working.

J.3 Mechanisms for Encouraging Local Working of Inventions

The present Canadian law provides for the grant of compulsory licences on application where, after three years from grant, the patentee has failed to establish local working of his invention in Canada. Compulsory licence provisions exist in most major countries throughout the world (with the notable exception of the US). How effective are such licensing provisions in encouraging patentees to share the technology they have acquired?

Statistically, there has been relatively little use of formal compulsory licensing procedures in most countries. The Banks committee, analyzing the equivalent sections in the UK, reported that over 1959-68, only 16 such applications (nonfood-drug) were filed and two applications granted (Banks, appendix D(d)). Over the same period in Canada, 23 applications were filed, of which three were formally granted, three refused and the rest either withdrawn or abandoned.*

An updated summary of the disposition of all compulsory licence applications under the Canadian act since 1935 is included as table 9 in this paper. A distinction must be made between compulsory licences to manufacture and those permitting importation. The discussion that follows relates only to licences to manufacture.

* Canadian Patent Office records.

According to statistics compiled in the UNCTAD report (table 13, p 111) Canada and the UK have experienced greater activity under compulsory licensing procedures than all other countries in the world. Only Denmark, Norway, India and the Republic of Korea are listed, over the periods canvassed, as having actually granted any licences at all. Compulsory licensing elsewhere is a nonexistent phenomenon.

While it may appear that the compulsory licensing provisions of the law are little used, it is often argued that they are an incentive for patentees to grant licences voluntarily. Many of the abandoned compulsory-licence applications may, in fact, constitute voluntary settlements between the parties. Many more applications may never have been filed because threats of compulsory-licence proceedings forced a settlement.

But a licensee must clearly demonstrate his insistence on acquiring a licence in order for the 'incentive' force of the compulsory-licence procedure to have an effect on voluntary negotiations. The statutory proceedings are not easy to pursue, nor do they place the compulsory licensee on a competitively equal footing with the patentee.

Table 9

Applications for Compulsory Licences

(From 1935 to April 24, 1975)

	<u>Granted</u>	<u>Refused</u>	<u>Withdrawn or Abandoned</u>	<u>Pending</u>	<u>Total</u>
Section 67	10	10	39	2	61
Section 41(3)	19	4	26	-	49
Section 41(4)	139	4	21	28	192
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	168	18	86	30	302

Source: Canadian Patent Office records. Section 41(4) licences permitting importation became available from 1969.

The Economic Council suggested that, with appeals available, the average pendency of an application for a compulsory licence for Canada is two years. The Economic Council continued to observe that (p 66):

"Such legal contests can be very expensive and the mere potential... serves to discourage applications for compulsory licences."

and warned that (p 93):

"... if a system of compulsory licensing is to work well - to encourage full technological transfer and invention-embodiment production in Canada... it must operate with a fair degree of certainty and speed."

But as long as a potential licensee requires not only a licence under the patent but also the assistance of the patentee in supplying essential knowhow, compulsory licensing procedures are not likely, in the words of the Economic Council, to "encourage full technology transfer".

A proper transfer of technology requires a cooperative relationship between the technology supplier and the technology receiver as part of a voluntary commercial exchange. An involuntary licensor, who is in an adversary position vis-à-vis his licensee, cannot be expected freely to relinquish additional pertinent knowhow and other information. In fact by applying for a compulsory licence a manufacturer may convert a relatively placid competitor into a formidable opponent.

Perhaps one of the reasons why compulsory-licence provisions have attracted relatively little attention is that a potential licensee must necessarily look ahead to the possibility that the patentee will be his major competitor once he obtains a licence and attempts to enter the Canadian market. What is to prevent the patentee from drastically reducing his prices for the Canadian market to a point where they are marginally above his costs? Exclusive licences have theoretically been available under the present Canadian law, but they have never been issued. Faced with the patentee as a competitor, the licensee would have little margin for profit, even if he could manufacture as efficiently as the patentee. The very possibility of this occurring may have contributed to the limited use of compulsory-licence procedures.

Rather than encouraging the transfer of technology, compulsory-licence provisions should be understood as merely operating to reduce somewhat the otherwise impenetrable barrier of the patentee's monopoly. That barrier is not eliminated, but merely reduced. Faced with a resisting patentee, the compulsory-licence mechanism to the licensee-candidate is more to be viewed as a hurdle to overcome and as something to be avoided, unless there is a real need to adopt new technology.

In summary, while compulsory-licence provisions may guarantee that access to inventions is available, they cannot create the desirable, and sometimes essential conditions of a willing licensor and licensee that will maximize prospects for an effective transfer of technology. Rather, such provisions are more likely to be of relevance only to an experienced applicant who is anxious to

adopt the new technology and has the capability and initiative to do so on his own without cooperation from the patentee. Compulsory licensees provide access to inventions, but are not an effective vehicle for full technology transfer.

Under these circumstances, the only effective way to provide a positive incentive for patentees to arrange for the local working of their inventions is to place them in the position that they must find a licensee (or establish local production facilities) within a reasonable period or lose their patent rights. Once a patentee is faced with these alternatives, it is likely he will consider seriously the prospects for finding a local licensee in Canada. Further, it is likely that he will only be able to obtain the cooperation of a local licensee by including the sharing of knowhow in his licensing arrangements.

Such a "two-tier" system has already been proposed in WIPO as part of the revised draft model law for Developing Countries.* It has the advantage of leaving the decision of whether or not to incorporate new technology into local production facilities up to the businessmen involved. The incentive for the patentee to license his patent rights and associated knowhow will be the prospect of obtaining an extension of a portion of his exclusive position in the Canadian market. If adequate licensing or production arrangements are made, the patentee will be entitled to continue to supply part of the Canadian market by importation without fear of competition from other foreign manufacturers. He will have to share the market with any Canadian licensees, but under the circumstances, part of a monopoly may be better than none. As well, Canadian manufacturers will be encouraged to license under patents for the extended term by the prospect of obtaining a head-start in applying new technology with the full cooperation and assistance of the foreign patentee.

At the same time, as long as the period of extension available is not excessive, both the patentee and any interested licensee will be forced to evaluate the long-term viability of any investment made in Canadian production facilities. Both the patentee and licensee will have to look ahead to the day when their temporary protection from the forces of competition will end. This will tend to mitigate some of the risks that the patent incentive will contribute to the creation of inefficient production facilities in Canada.

Further, although it would be generally more desirable to provide public support for the upgrading of industrial technology on a selective basis, the patent system at least has the selective element of applying only to new technology. As indicated by the Economic Council in its report "Looking Outward", general support for activities with a high technological content reduces to some extent the risks of supporting activities which may turn out to constitute a misallocation of resources (p 133).

* cf WIPO document WG/ML/INV/II/1, February 24, 1975.

Finally, at all times the patentee and any Canadian licensee will have to accept the limiting restraints that the entry of patented goods under the provisions on exhaustion will have on the pricing policy for goods being sold in Canada (infra p 141).

In this manner it is expected that the Canadian patent system will be able to benefit Canada by supporting the transfer of technology, while at the same time limiting the costs associated with supporting the creation of inefficient production resources through the granting of exclusive rights.

In making the decision to propose a two-tier patent term, the Economic Council's proposal with respect to compulsory licences was not adopted. An analysis of the nature of that proposal and the reasons for avoiding its adoption will now be outlined.

K Economic Council's Compulsory Licensing Proposals

The Economic Council proposed that (p 91):

"all Canadian patents should... become eligible for an automatic non-exclusive licence to manufacture in Canada five years after the (date of the Canadian application or the first commercial use anywhere in the world, whichever is later)".

The purposes behind this recommendation were said to (p 91):

1. give Canadian producers an opportunity to work inventions;
2. encourage the working of a wider range of invention in Canada;
3. encourage lower prices for consumers in Canada.

The Economic Council indicated (pp 93-4) that it considered the uncertainty and delay inherent in the present compulsory licence system as a hurdle to the adoption of new inventions by Canadian industry. By making such compulsory licences available as-of-right the barriers of administrative delay and uncertainty would be eliminated.

In order to accommodate the various periods or lengths of time within which patentees carry out the preproduction development of manufacturing techniques, the Economic Council proposed that the five-year period of absolute private monopoly should run only from the date of first commercial use of the invention anywhere in the world. This would guarantee every patentee a full five-year head-start period before having to submit to competition in Canada from Canadian licensee-manufactures.

As indicated above, the proposed law attached to this working paper contains provisions which will lead to the early termination of patent rights in cases where the patentee fails to establish

local working of the invention in Canada. While it would not be impossible to impose the Economic Council's licensing proposal over the two-tier patent system, the proposed law does not incorporate such a feature.

The council's compulsory licensing scheme has not been adopted for a variety of reasons. Those reasons include:

- (1) recognition that compulsory licensing, due to the importance of knowhow, is far less desirable than voluntary licensing which includes knowhow;
- (2) the expectation that the two-tier system will produce a significant degree of voluntary licensing;
- (3) the desirability of retaining a degree of exclusivity during the extended portion of the patent term to serve as a maximum incentive for patentees to license their inventions for working in Canada;
- (4) technical flaws and deficiencies in the Council's proposals.

The council's proposals will now be examined in greater detail.

K.1 Analysis in the Council's Proposal

If the two-tier system were not adopted and a conventional single term of patent protection was made subject to the council's proposals, then such a system would, under certain circumstances, be of particular benefit to foreign patentees. Under the scheme as proposed by the council, as long as no Canadian manufacturer came forward to obtain a licence, the effect would be to permit the patentee to enjoy the full benefits of exclusive control of the Canadian market for the purposes of importation. Because the Economic Council would limit its compulsory licences to be available only for manufacturing in Canada, alternate foreign-source suppliers of patented goods would continue to be excluded from the Canadian market. Canadian consumers would be forced to purchase only goods originating from the patentee and could not shop around for alternate foreign sources.

Thus, under the Economic Council's proposal, as long as no Canadian-based competitor arose, the patentee would be free to maintain a competition-free pricing policy for the full term of patent protection (subject, or course, to imports permitted under the council's import provisions). This system should be contrasted with that of the proposed law which would, in the case of inventions which are not worked locally, throw open the right of all Canadians to shop for goods abroad upon the termination of the patent right after the initial term.

With respect to the circumstances of Canadian manufacturers who would have the willingness and capability of adopting new, patented technology (without the cooperation of the patentee that might otherwise be available under a voluntary licence) the compulsory-licence scheme proposed by the Economic Council has a further defect.

The effect of tying the commencement of the five-year term to first commercial use is to delay the availability of the invention until the patentee has taken the initiative to work the invention. Since the Economic Council recommended the retention of a 17-year term (running from date of application), access to an unimplemented invention otherwise than by a negotiated licence would occur only on the expiration of the 17-year term. This should be contrasted to the provisions of the present law which make such licences available after three years from grant.

Under the Economic Council's proposal a patentee who chooses not to utilize his invention commercially until the twelfth year (where the full term is 17 years) would be effectively free of any responsibility to license his invention during the life of his patent. Of course, one could meet this last objection by imposing the traditional compulsory licensing system over the proposal of the Economic Council. But by doing so, there is an effective admission that the council's proposal does not solve the problem of ensuring early access for Canadians to new technology that is subject to patent rights held by foreigners.

The Economic Council's proposal, without the retention of the traditional compulsory licensing provisions, would make access to patented inventions through a licence-of-right available only after the patented technology had become old. Canadian manufacturers would only be guaranteed access to new technology after the patentee had acquired five years of experience in its exploitation.

If the patent system is to assist Canada in encouraging the development of industry which is prepared to advance with the frontiers of development of modern technology, then such a delay would be self-defeating. During the five-year period of foreign production, further improvements and refinements will probably be discovered, based on use of the patented process or article. These may give rise to further patents.

As suggested earlier, by participating at the earliest possible stage in the exploitation of this new technology, Canadians will have better prospects to acquire patent rights in improvements flowing from the use of earlier technology. The benefits of patent rights so acquired would, or course, not be restricted to Canada, since inventors are entitled to apply for and control patents for their inventions in virtually every country of the world.

K.2 Technical Problem of Determining First Commercial Use

Another difficulty of a technical nature exists in attempting to adopt the Economic Council's compulsory licensing proposals. This problem turns on the means for determining the date of first commercial use of a patented invention anywhere in the world.

Unfortunately, there may be considerable administrative expense and uncertainty inherent in any mechanism established for determining actual commercial use. This is particularly true where the bulk of inventions are first commercialized abroad. The bulk of patents are for narrow, technical features of industrial articles or processes and a considerable number of man-hours would normally be required to evaluate whether a patented invention is being worked. It takes time to read and understand a patent disclosure, particularly the difficult and carefully worded claims which define the scope of monopoly. Such articles would have to be examined, and where complicated, evaluated by experts familiar with that technology.

The ability to read and understand patent specifications is the speciality of the patent agent. Ordinary engineers and production personnel are normally unable or unwilling to assume the responsibility of determining whether an industrial article or process falls within the scope of patent claims.

Applying this to the proposals of the Economic Council, a particular difficulty arises from the availability of compulsory licences hinging on the first use of an invention anywhere in the world. Apart from the question of whether concealed -- or open-infringing use would qualify as 'use', Canadian patentees would presumably be required to establish, at least on request after five years into the patent term, not only whether the patentee himself was using the invention, but also whether it was being used by any parent, subsidiary, other affiliated organization or arms-length assignee anywhere in the world. Compulsory-licence applicants could not be expected to establish the date of first commercial use (this would defeat the objective of formality-free access to obtain licences). Therefore, patentees would have to be obliged to establish as a fact non-use of the invention.

Due to its nature such an exercise, involving as it does the procedure of inquiry and exchange of information between patent professional and production specialist, the international nature of the search imposed on the patentee could be a substantial burden.

Under the first-world-use proposal, either considerable resources would be applied in carrying out the type of world inquiries described, or Canadian manufacturers would only use the system with respect to those successful inventions which have been in open or notorious use for a full five years. In the first case, the objections of patentees to such a system deserve consideration. In the latter case, 'access' to a significant number of relevant inventions would not become apparent until the patentee had become thoroughly entrenched.

It is on the basis of the foregoing analysis that the general compulsory-licence proposals of the Economic Council have not been adopted in the proposed draft law.

L Economic Council's Policy on Importation

The Economic Council, in dealing respectively with patents, trademarks and copyright in its Report on Intellectual and Industrial Property, consistently recommended that in each field provisions be introduced to advance the free flow of goods into Canada. The suggestion was made in every field to incorporate provisions in the law allowing the free importation of goods from foreign sources, under certain limited circumstances.

L.1 As Applied to Trademarks

In the case of trademarks, it was observed (pp 199-204) that trademark rights had in some cases been used to limit competition that would normally arise through arbitrage between various markets.*

In order to assure that similar goods produced by a related company and sold at lower prices in foreign markets could be imported into Canada in competition with higher-cost Canadian goods, the council proposed that the trademark right not apply in such cases. This would effectively neutralize the potential of the trademark right to serve as a private nontariff barrier to trade.

This policy was endorsed in the working paper on trademarks released in 1974.

L.2 As Applied to Copyright

Similar proposals were made regarding copyright. The council observed (pp 152-4) that a substantial difference exists between prices for certain books being printed in Canada and abroad and that as a result of certain provisions of the present copyright law, the Canadian book-reading public had no choice but to purchase the more expensive Canadian-printed books. The Council recommended that (p 155):

"Canadian copyright law should not deny anyone the right to purchase works protected by copyright in other countries where they also enjoy copyright protection and to import these works into Canada."

* By 'arbitrage', the Council was referring to the process by which traders purchase goods in markets where goods are available at relatively cheap prices and introduce them for sale at competitive prices in other markets where prices are higher. It is generally believed that the prospect of competition arising from arbitrage will put a ceiling on prices within local markets.

The copyright proposal is broader than the trademark provisions since, unlike trademarks, there is no qualification that the goods, to pass freely, must have been purchased from a person related to the Canadian owner of the copyright.

L.3 As Applied to Patents

In its review of patents the Economic Council took a position similar to that recommended in respect of revisions to the copyright law. The council proposed that (p 90):

"The patent right should be so defined that neither the holder of a Canadian patent nor any licensee thereunder should have the right to prevent the importation into Canada by any person of the patented article ... from other countries where the article ... enjoys patent protection."

The report then went on to explain that the main purpose behind this recommendation was to:

"... prevent a patentee from using the Canadian patent system as a means of assisting any international price discrimination to Canada's disadvantage -- i.e. from charging an unjustifiably higher price in Canada than in other countries where he has patent protection."

It was also remarked that an additional effect would be to:

"... discourage future use of the Canadian patent system as a trade barrier behind which to set up high-cost internationally noncompetitive production in Canada."

This position differs from the proposal for trademarks in that the identity of the originator of the foreign-produced goods is ignored. Under the patent proposals, if there is patent protection in the local foreign market, then once marketed, the goods would be free to circulate in Canada. The Economic Council was quite specific that:

"Canadian patent-holders or their licensees should have the right to prevent ... importation from countries in which patent protection for the relevant article ... is not available."

These proposals are compatible with the theory that in marketing goods under protection of local patent rights, the price of goods will normally be set above those prevailing under competitive market conditions and the patentee would presumably thereby obtain his due reward. This reward could pass directly to the patentee if the foreign goods originate with him or could arise through royalty payments from a locally authorized licensee.

The council's proposal with respect to the fate of goods marketed abroad by a nonlicensed infringer is unclear. If the council intended that the mere existence of patent rights in the foreign

market should free goods for importation to Canada, then this is equivalent to saying that patentees should be obligated to enforce their rights centrally, at the source of infringement. The corresponding national policy, that only manufacturers should be liable for infringement and not distributors or vendors of patented products was, however, never proposed.

An alternate policy that could be adopted would be to allow the Canadian patentee to retain the right to restrict importation of goods originating from an infringing (unauthorized or unlicensed) source. This alternative makes the identity of the source of such goods a significant issue. It is equivalent to the proposal accepted in Europe with respect to the exhaustion provisions of the convention for the European Patent for the Common Market.

This convention, signed December 15, 1975 at the final diplomatic conference held in Luxembourg includes an express limitation on the patent right in Article 32, which reads as follows:

"Exhaustion of the rights attached to a Community Patent:

(1) The rights attached to a Community patent shall not extend to acts concerning a product covered by that patent which are done on the territory of the Contracting States after the proprietor of the patent has put that product on the market in one of these states.

(2) The provisions of paragraph 1 shall also apply with regard to a product put on the market without infringement of the community patent by a contractual licensee or by a licensee under article 44."

This article implements the traditional European view that having once voluntarily sold patented goods on the market, the patentee has exhausted his rights under the patent to retain thereafter further sale, circulation or use of such goods. The Community Patent provisions therefore reflect a policy which focuses on the person who originates the patented goods.

If the intention of the Economic Council was that the mere existence of local patent rights operate to permit goods originating in such jurisdiction to be imported into Canada, then serious objections can be raised against implementation of its proposal.

The effect of such a provision would be to force holders of Canadian patents to rely on the courts of foreign jurisdictions to protect and preserve the benefits of their patent rights in Canada. An obligation to pursue 'central enforcement' of patent rights is open to the same objections raised against 'central attack' in the 19th century debates leading to the introduction in 1900 of art 4bis of the Paris Convention.

Art 4bis (1), as introduced at the revision conference of Brussels, 1900, provided:

"(1) Patents applied for in the various contracting states ... shall be independent of patents obtained for the same invention in other states ..."

This article was introduced to prevent member countries from adopting provisions which would tie the validity of the local patent to the fate of some foreign patent.

Canada has adhered to the provisions of the Paris Convention at the level of the London revision, and any introduction of provisions requiring central enforcement may be within at least the spirit of the type of provisions barred by article 4bis.

Thus, it would not be appropriate to adopt the proposals of the Economic Council with respect to the free importation of certain classes of patented goods under the version reviewed above.

However, in preparing the proposed draft law, the principle of 'exhaustion', based on the precondition that persons authorized (or presumed to be authorized by the patentee) have caused goods to be introduced into the market, has been adopted.

In maintaining this version of the Economic Council's proposals, the impact of exhaustion as an instrument for limiting or putting a ceiling on the incentive force of the patent right has been recognized. The mechanism of exhaustion can serve to limit the circumstances under which patent rights may act as an incentive to invest in production facilities in Canada and thereby meet the object of the Economic Council that the patent system should not support the establishment of high-cost production facilities in Canada which can never aspire to exports.

The proposal of the Economic Council with respect to reducing import restrictions has not been adopted in one further respect. The council specifically allowed that a free right of importation would not be allowed to arise with respect to goods originating in a country lacking patent protection. However, the English and Canadian law has long carried a presumption that where a patented article is sold by the patentee without restrictions, the purchaser is entitled to deal with it as he pleases. This would include resale in any country in which the patentee holds a patent (H.G. Fox, "Canadian Patent Law and Practice", 4th edition 1969, p 385).

In an authoritative English decision (Betts vs Willmott*) Lord Hatherley stated in 1871 that:

* (1871) 6 Ch. App. 239.

"Unless it can be shown, not that there is some clear injunction to his agents, but that there is some clear communication to the party to whom the article is sold, I apprehend that, inasmuch as he has the right of vending the goods in France or Belgium or England, or in any other quarter of the globe, he transfers with the goods necessarily the license to use them wherever the purchaser pleases. When a man has purchased an article he expects to have the control of it, and there must be some clear and explicit agreement to the contrary to justify the vendor in saying that he has not given the purchaser his license to sell the article, or to use it wherever he pleases as against himself."

Further cases have held that where a subsequent purchaser has notice of restrictive conditions expressly imposed by the patentee and accepted at the time of original sale, such purchaser can become liable for infringement. (see Fox, op. cit. p 386). But the House of Lords in England has ruled that restrictive conditions do not 'run with the goods' to fetter subsequent purchasers who have no notice of them (*National Phonograph Co. of Australia v Menck**). Thus, exhaustion already exists in theory under the law, at least where a person purchases goods originating from the patentee without stipulation of restraint, irrespective of whether local patent rights exist.

When a purchase is made subject to express conditions limiting the subsequent importation of goods into Canada, then that is a matter of contract between the patentee and purchaser. Persons having notice of the terms of that contract may become liable for instigating or assisting in its breach. Such breaches would be subject to the law of the foreign country in which the contract was made. Canada, however, need not support enforcement of that contract through grant rights against the public at large under Canadian patent law.

Accordingly, the express suggestion of the Economic Council, that import restrictions be permitted against goods originating in a country not offering patent protection, has not been accepted. Rather, goods originating from the patentee, or from persons related to him (as explained in greater detail subsequently) will be assumed to have been 'paid for' for all purposes under the proposed patent law.

The next subject to be considered are the features of the present patent law which argue for the need for reform.

* (1911) AC 336.

M Need for Reform

Prior to development of the actual proposals for a new patent law for Canada, certain aspects of the present law will be reviewed. Although the present law may appear to be working, there is a need to make revisions in the law. Immediate provisions would be desirable both in the interest of the public and to make the patent system more rational for patentees. The following analysis outlines briefly features of the present act which may be subject to criticism and which indicate the present need for reform.

M.1 Substantive Matters

M.1.1 Term -- s 49

Section 49 of the present act provides that the patent term shall extend for 17 years from the date of grant of the patent. Though this is not universal, many other countries in the world tie the commencement of the patent term to the filing date. A change in Canadian law placing a limit on the extension of the patent term into the future, rather than allowing it to be prolonged by the period of pendency for examination before the Patent Office, is urgently needed.

One example of the effect of the present provisions, (where the term runs from grant) occurred in the case of Radio Corporation of America v Philco Corporation (Delaware), cited by the Report of the Special Senate Committee on Science Policy (vol 2, p 557). In that case, the grant of patents involving aspects of some of the basic technology of colour television was delayed until 1969, although the applications had been filed in 1952.

In cases such as these, patents may, upon grant, be imposed upon an industry which has become thoroughly established or has completely adopted and integrated the new technology. The potential benefit or worth to a patentee of a patent under these circumstances can be enormously inflated and entirely disproportionate to the costs of research leading to the invention. Such a patent can serve no useful economic purpose as far as the encouragement of innovation goes, since the new technology will by then have been adopted even in the absence of patent protection.

The Senate report further quoted the Patent and Trademark Institute (vol 2, p 557) as estimating that the "average length of time for an application for a patent that is in a more complex field, such as electronics or organic chemistry, where there is no conflict, is three to four years". Efforts to speed up the examination process within the Patent Office, in contrast to changing the basic policy of the law, is a mere band-aid approach. There is no incentive under the present law for applicants to respond quickly to office actions, (they usually have six months to reply). And, inevitably, even if the conflict procedure were abolished, the patent would still be further delayed in cases where there is an initial rejection followed by successful appeals to the Federal and Supreme Courts.

Only an amendment tying the duration of patents to the date of application or the priority date will overcome this objectionable effect of the present law.

M.1.2 Early Publication -- s 10

The same period of pendency of applications due to evaluation by the Patent Office and the courts that results in an extension of patent protection into the future also has the effect of delaying disclosure of the invention to the public. The present law provides under section 10 that only disclosure associated with granted patents shall be open for public inspection. If one of the rationales for maintaining the patent system is early disclosure of recent advances in technology, then the present Canadian system of only releasing patent specifications from secrecy on grant of the patent serves only to defeat this basic purpose.

Early publication has become increasingly accepted in many other countries throughout the world. By tying the date of publication to a fixed period following the priority date of an application, industry will be guaranteed the benefit of the potential patentee's research at a date no later than that fixed for publication.

It would also be preferable for the Canadian application to be laid open at an early stage so that information on the scope of monopoly being sought could also be obtained by interested members of the public.

M.1.3 Grace Period before Filing -- s 28

Section 28 of the present act allows an applicant a two-year grace period before filing his application in Canada. Switching to a first-to-file rather than a first-to-invent system does not necessarily mean that a grace period cannot be maintained. The advantage to patent applicants of the grace period is that they are assured a period following the date of inventions during which they may publicly evaluate and disclose their inventions. Such an evaluation can then, when commercial potential is determined, assist the inventor in deciding whether to file an application.

The disadvantage for Canadians of the grace period is that by relying on the Canadian grace period before filing to obtain a Canadian patent, the much more valuable foreign property rights will be lost in countries which do not permit public disclosure before filing. For foreign applicants, accustomed to the absence of a grace period, the Canadian provision is no inconvenience and, in certain cases, results in applications being filed in Canada which would be statute-barred in their own countries.

A further objection to the maintenance of the grace period is that it introduces delay, not only of disclosure of the fact of the invention, but also of the fact that a limitation on the use of the patented subject matter may be imposed on the Canadian public. The present law should be changed to eliminate or reduce the grace period.

M.1.4 Burden of Proof on Grant of a Patent -- s 42

Section 42 of the present act provides that the Commissioner of Patents may refuse an application only when he is "satisfied" that the applicant is not by law entitled to be granted a patent. The effect of this terminology is to give the applicant the benefit of the doubt. The Commissioner must, in effect, understand why he is rejecting an application rather than the converse -- being satisfied that the applicant is entitled in law to a patent.

For patentees interested in obtaining patents of improved reliability, it would be advantageous to have the reputation of the patent system in Canada improved by reversing this burden. If there is any uncertainty in the law regarding whether a certain type of application is entitled to patent protection, then this should be settled either at the examination stage or in the courts on appeal, before burdening the public and the patentee with a monopoly of uncertain validity.

M.1.5 Compulsory-Licence Provisions -- ss 67-71

Section 67 of the present act provides that, where the listed abuses exist, an application for a compulsory licence may be filed after three years from the date of grant of the patent. As indicated earlier, delays arising in the prosecution and examination of patents effectively extend the term into the future and delay public disclosure of inventions. As well, by setting the period of delay before applications for compulsory licences may be made on the basis of the date of grant, the significance of these compulsory-licence provisions is greatly reduced.

Section 67(2)c and d allow the grant of licences where trade or industry in Canada are "prejudiced". Thus, these provisions contemplate situations of need where licences would be in the national interest. There is no rational justification for delaying the protection of Canadian industry under these circumstances, simply because of prolonged examination of applications. New provisions ensuring that this delay does not arise would therefore be desirable.*

* The provisions of the Paris Convention, at the level of the London revision of 1934 to which Canada has adhered, deal expressly with delaying the issuance of compulsory licences. Although a delay of three years from grant of the patent is specifically required under article 5A of the convention, it was not intended that this provision should apply in respect of abuses other than failure to work an invention locally. This interpretation was affirmed at the Lisbon revision conference of 1958 and was recognized by the Ilsley Commission (Part 8, section 5, p 77). Accordingly, Canada's participation in the International Union should not be viewed as a limiting or controlling factor which should, in this case, shape Canadian law into other than the most rational form.)

M.1.6 Definitions of Patentable Subject Matter -- ss 2, 28 and 29

The definition of "invention" contained in s 2 of the present act has been part of Canadian law for a long period of time. One would have thought that its effect, in combination with ss 28 and 29, would be clearly established. Yet, uncertainty continues to exist as to whether certain types of activities, processes, methods or products qualify for patent protection.

The section is drawn originally from the US patent code, but the courts have relied heavily on British jurisprudence. The law of the UK still relies on the wording of the Statute of Monopolies, which limits patents to subject matter which can qualify as a "manner of new manufacture". This standard has led to difficulty in the past in various countries adopting British jurisprudence concerning whether methods for extinguishing smoke bombs, pruning fruit trees, curling hair, weeding fields, tenderizing meat, subdividing land and suturing wounds are patentable subject matter.

Although the trend in recent British jurisprudence has been away from an artificial test (such as whether a vendible product has been created, preserved or improved) and, although the Supreme Court of Canada has definitively ruled that we are not bound by British jurisprudence, the uncertainty regarding whether certain matters qualify for patent protection still exists.

Section 2 provides that "invention" means "any new and useful art..." and s 28 provides that the inventor of an invention may (on compliance with other requirements) obtain a patent. The definition of invention is potentially so broad that it is certain to continue to invite future litigation. Section 28(3) attempts to provide some limits by prohibiting the granting of patents for any invention which has an illicit object in view, or is a mere scientific principle or abstract theorem. However, it would be preferable to delineate expressly, by way of more explicit exceptions, the subject matter excluded from patentability.

M.1.7 Entitlement to a Patent -- ss 28, 43 and 63

Section 28 of the present act provides that a patent is to be granted on application by an inventor. This provision alone does not make the present Canadian patent law a first-to-invent system. Rather, it is the qualification of ss 28(1)a -- "an invention not known or used by any other person before he invented it" -- that has this effect. While there may be some moral satisfaction in reserving a valid patent right to the first person in the world who conceives a new idea, this provision is much more difficult to put into effect practically. In fact, the inequity of allowing a Canadian patent to be defeated by prior secret knowledge in a foreign country led to the introduction of the provisions of s 63 of the present act. Section 63 (apart from technical provisions for 'missed conflicts') provides that once a patent has issued, only prior secret knowledge which became "available to the public" before an applicant's filing date can defeat the patent.

The result of the combination of ss 28 and 63 is that a patent application which is technically not patentable because it pertains to an invention previously known by another person before the applicant invented it, may become a valid patent merely by being issued. This places a tremendous responsibility on the Patent Office, a responsibility which it cannot possibly meet in practice. If the Patent Office were to attempt to apply s 28(1)a vigorously, the scope of search required to detect prior knowledge of an invention would demand enormous resources. Searches of this type are not presently done and could in most cases not be done.

In one special case, the present act recognized that evidence of prior knowledge by another person may come to the attention of the Patent Office in the course of examining an application. Section 43 of the patent act permits the Commissioner to require that an applicant-inventor provide evidence, where a foreign patent describing the invention has issued within the two-year grace period, to satisfy the Commissioner that the inventor conceived his invention before the issue of such patent. But the provisions of s 43 apply only as of the date of the issue of a foreign patent. No attention is paid to the fact that such foreign patent was filed at an earlier date at which time the foreign applicant must surely have, in the terms of s 28(1)a, known of the invention. Nor is provision made for the Commissioner to require an applicant to swear back* earlier than the date of disclosure in a nonpatent publication, such as a published patent application or an article in a trade journal.

The only conclusion that can be drawn from analyzing the combined effects of ss 28, 43 and 63 is that the provisions are a patchwork, built up over time as certain undesirable situations became recognized in an era when world communication and foreign patent procedures were substantially different than they are now.

M.1.8 Conflicts -- s 45

Inherent in the first-to-invent system is the procedure by which a decision is made concerning which of several pending applications for the same inventions shall be recognized as entitled to a patent. This procedure, called a conflict in Canada and an 'interference' in the US, can be notoriously complex and expensive. The procedure in Canada before the Patent Office, unlike that in the United States, does not take the form of a trial, but proceeds on the basis of the preparation of sworn affidavits detailing the various stages of the inventor's conception and demonstration of his invention. It is on the basis of these affidavits that a decision is made by the Commissioner. The decision of the Commissioner may then be appealed to the Federal Court.

* To swear back in the sense of swearing in an affidavit that the conception of an invention happened earlier than the cited date.

Unfortunately, patents involved in a conflict procedure which is subsequently appealed to the Federal Court are likely to be of considerable value. The expenses of litigation before the Federal Court are only justified when the patent itself is likely to represent a valuable property right. Ironically, it is due to the conflict procedure with its appeal stages, that these relatively valuable patents are further delayed prior to grant, thereby extending the monopoly into the future.

The problem of conflicting applications can never be entirely avoided. Even under a first-to-file system copending applications may be received which disclose substantially the same or very similar inventions. Whether the inventions in two copending applications are the same, may become a matter for dispute. The determination of this matter would involve settling entitlement between applicants with conflicting interests and would have to be carried out even under a first-to-file system. However, in a first-to-file system, the complex and expensive procedure of eliciting the facts as to the nature of each party's understanding of the invention at an earlier date is avoided. The first-to-file system, in effect, recognizes that the invention process entitling an applicant to a patent is only complete when a proper disclosure document is delivered to the Patent Office. The complexity of the alternate procedure, that of permitting applicants to rely on a date of conception which may be many years prior to the filing date (and unaffected by the limitation of any grace period) is a luxury that Canada can ill afford.

M.1.9 Patents for Food and Medicines -- s 41

The compulsory-licensing provisions under the present patent act pertaining to food and medicine are generally well known due to the controversial amendments introduced in 1969. A feature of the act, less well known to members of the public, is the restrictive and artificial manner in which patentees are required to define their monopoly in respect of food or medicines.

Section 41(1) of the present act provides that inventions relating to substances prepared or produced by chemical processes and intended for foods or medicine may not be directly claimed, but may only be claimed in a process-dependent form. That is, when defining such an invention, the inventor must describe it in terms of the process which produces his product. He is not allowed to define the product by its physical or chemical characteristics independently of the process by which it is made. The result is an artificial loophole or excision in the exclusivity of patentee's rights in the case of new substances of this type.

Any person who conceives of a process, unclaimed by the patentee, which leads to the same food or medicine, may use it with immunity from infringement.

The history of this provision, predating the compulsory-licence provisions respecting food and medicines, may be traced to the British patent act of 1919. The intention at the time was to

provide some relief to the British chemical industry from domination by German chemical industrialists. This method of limiting the patentee's rights has been thoroughly superseded by the compulsory-licensing provisions of subsections (3) and (4). Mandatory process-dependency for claims directed to foods or medicines is an artificiality which can lead to wasteful and undesirable litigation.

A recent and good example is the litigation which reached the Supreme Court of Canada over the question of whether the process by which powdered skimmed milk is agglomerated to improve its instant dissolving qualities constitutes a 'chemical process'. In order for the court to be informed of the meaning of these words, the parties are entitled not only to refer to prior judicial pronouncements, but to lead expert evidence on the general understanding of the word 'chemical'. When this particular instance of litigation terminates, four adjudicative levels will have considered the issue: the Patent Office, when it originally allowed the claims without qualification of process-dependency (alleged now to be necessary); the Exchequer Court Trial Division which heard the expert testimony; the Federal Court Appeal Division which reversed the conclusion of the Trial Division; and the Supreme Court of Canada.* In this case the term of patent protection has already started to run and will not be extended by this litigation.

M.1.10 Invalidity of Patents -- ss 62, 61 and 55

It has always been understood that where a patent is issued in error, it is technically null and void. Section 62 of the present act provides that any interested person may obtain a declaration of invalidity from the Federal Court. The legal results and problems of declaring null an instrument which has governed the activities of businessmen and formed the basis for licence royalties and other agreements may appear inordinately complex to the layman. However, the law long ago developed various principles in dealing with similar cases (such as the provision that money paid under mistake of law may not be recovered) which make the present system workable.

On the other hand, the possibility of retroactive invalidity removes patents one step further beyond the understanding of ordinary businessmen, and reduces their value as economic assets. For instance, if an attempt were made to borrow money from a bank using a patent as collateral, the first question that would likely be asked is: "How do we know this patent is valid?"

Of greater concern is the effect of s 61 of the present act. That section provides that a person may rely as a matter of defence in an infringement action on the invalidity of the patent without generally invalidating the patent for others, too. This is not a

* of Dairy Foods Inc v Co-operative Agricole de Granby decided Supreme Court of Canada, December 19, 1975.

bad section as far as the defendant is concerned, since it is of no consequence to him whether the patent is merely held invalid against him or revoked as against the public. In either case, the patentee will not be able to come against him a second time. But, under the present law, a patent which has been held unenforceable in one action by reason of the success of such a defence may, nevertheless, be asserted again in another action by the patentee against someone else. Furthermore, licensees not party to the litigation are placed in the situation of having to continue to pay royalties under a patent which is unlikely to deter third parties from entering the market.

Accordingly, it may be fairer to licensees, and in the public interest generally, for litigation with respect to the validity of a patent to end once the patentee has had a single, full and fair hearing on the issue. In any event the distinction between a defence of invalidity and an application for a revocation of a patent (which will operate against everybody) is an illogical distinction which should no longer be maintained.

One further aspect of the present law with respect to the invalidity of patents that deserves attention is the effect of the present s 55(1). That section provides that a patent is void if it contains more or less than is necessary to carry out the invention and such omission or addition is wilfully made for the purpose of misleading. On the basis of this provision, at least, a patent may not be invalidated for insufficient disclosure if the insufficiency was accidental.

The provision of s 55(2) that, in such a circumstance, the patentee is "entitled to the remainder of his patent pro tanto" has never received express judicial interpretation and its meaning is vague. Does s 55(2) mean that the judge is entitled to redraft the claims so as to delineate better the part of the invention properly disclosed? Or does it simply mean that all claims based on the improper disclosure will be held invalid and the rest supported? The section has probably received little attention since it is arguable that such a patent may be invalid for failure to comply with the standards of disclosure required under s 36(1). But the relevance of s 55 is still uncertain. The law is unclear and such conditions are always conducive to litigation.

M.1.11 Right to Amend -- ss 50, 51

There is no express provision under the present act which guarantees to an applicant the right to amend his application. Such right is, however, recognized under the rules, and has never been effectively questioned in the jurisprudence. Once a patent issues, a patentee may correct errors by applying for reissue under s 50. Unlike the corresponding section in the US (which allows reissue to narrow the claimed monopoly at any time) a reissue application under s 50 may only be filed within four years from grant. Thus, once four years have passed, there is no mechanism by which a patentee may correct errors in his disclosure and salvage at least part of the rights to which he would otherwise be entitled.

Section 51 allows the patentee to disclaim such parts of his specification of which he subsequently discovers he was not the first inventor. As interpreted by the Patent Office for several years, this has been taken to mean that he may disclaim claims only in their entirety. Though recent jurisprudence has indicated that a partial disclaimer might be proper under this section, the law is still uncertain. It would be desirable to make express provisions delimiting the extent to which patents can be amended, particularly where the patentee wishes to narrow voluntarily the scope of protection that he claims.

M.1.12 Intervening Rights -- s 58

Another section which may potentially operate as a real injustice to patentees is s 58. Under that section, any person who stockpiles patented articles prior to the grant of a patent is entitled to dispose freely of all such articles so acquired. Since under s 11 of the act it is possible to determine that a patent for a certain invention is pending, competitors are able, at least in part, to circumvent some of the patentee's exclusive monopoly. This could particularly arise where an applicant relies on his two-year grace period to disclose his invention through publication or in the course of conflict proceedings where the delay in the grant of the patent is substantial.

This section, although it has existed in the law for some time, did not become a focus for extensive criticism until recent decisions interpreted the section as extending to process inventions. The effect of these decisions would be to grant a continuing immunity, even after grant of a patent, to use a process invention. The full effects of these recent decisions has not yet been explored. Rather than leave this issue to the uncertainties of jurisprudential development, statutory provisions should reconcile conflicting interests of patentees and prior users.

M.1.13 Liability Without Notice -- s 46

Section 46 of the present law defines the patentee's rights in terms such that a person may infringe those rights without even knowing that a patent exists. Since damages may be claimed by the patentee from the moment of first infringement, the present law may work a real hardship against infringers who suddenly discover they are required to 'deliver-up' all their stock of the infringing article they have produced and account for and pay over all prior profits.

Inevitably, the enforcement of a patentee's exclusive rights will impose an inconvenience on members of the public who attempt to exploit an invention without his consent. Even if the sanction for infringement against 'innocent' infringers were limited to an injunction restraining future infringement, loss would arise by reason of wasted investment in capital and advertising.

Theoretically, any manufacturer can carry out a search at the Patent Office in order to be sure that he will have the right to market a new product. But such a search can never be absolutely

reliable. Besides search error and the uncertainties of the Patent Office classification of patents, a patent may issue just after a search.

Under the present law, a patentee is under no obligation to limit his claims against innocent infringers who cease infringing on receiving notice of the patentee's rights (although this may in many cases actually occur). Provisions guaranteeing to the public the right to disengage from infringing practices without suffering punitive loss would be a clear improvement in the law.

M.2 Procedural and Technical Matters

The above examples generally are matters of some degree of substance. The following references apply to minor inconsistencies and defects in the structure of the present act.

M.2.1 Mandatory Marking -- ss 24, and 80

Section 24 of the present act requires that all articles be marked with the reference "patented, 19--". There is substantial non-compliance with this provision. The only sanction is that set out in section 80 of the act which provides for a fine. It has never been enforced.

Compulsory marking of patented articles may tend to publicize the existence of a patent in certain cases, but manufacturers, doing a market analysis in contemplation of imitating an item that is already available, should conduct a patent infringement search in any event. Under these circumstances, it would be preferable to repeal the compulsory marking provisions as ineffective.

M.2.2 Registration of Licences -- s 53

Section 53(2) requires (using the mandatory "shall") that every assignment and grant of an exclusive right under a patent be registered. Although s 53(4) ensures that, as between registrants, the first party to register acquires title, there is no sanction under the present act for failure to register such instruments. Therefore, there is no guarantee that a member of the public can determine the true ownership of a patent from the face of a public register. Further, no provision exists under the present act pertaining to the registration of a nonexclusive interest of licence. Clearly, the registration provisions are in need of revision.

M.2.3 Patent Agents -- ss 15 and 16

Sections 15 and 16 of the patent act deal with granting official recognition to those specialists who have been approved by the Patent Office as being competent to prepare and file patent applications. Section 15(2) assigns to the regulations the conditions under which a person may be entered as a registered patent agent. Section 15, however, gives the Commissioner discretion regarding the suspension or revocation of a patent agent's privilege.

The status of registered patent agent is of sufficient professional standing to merit adoption of further regulations governing proper conduct and the procedures by which a patent agent may be challenged for misconduct.

The preparation of patent applications, specifications which may ultimately become tested by the standards of the law, is of such importance that governmental concern for persons providing such services should not be limited to controlling the presentation and prosecution of applications for patents or other business before the Patent Office. Some provisions should exist controlling persons who assist inventors to prepare applications, relying on the inventor to file the documents in his own name. Further, inventors interested in acquiring patent rights in foreign countries deserve equal attention and protection.

M.2.4 Regulations

Throughout the present act, many details are set out explicitly which would be better allocated to the regulations. In many cases this is a matter of style but in some instances inability to vary the terms of the act regarding minor details without passage of a new law in Parliament may cause considerable inconvenience.

One example is the provision of s 45(8) which allows the Commissioner to fix a time for an appeal under the conflict procedure. In one case, where the Commissioner attempted to extend the period that he had previously fixed, the Court held that this was ultra vires and that the right to appeal had expired. If a situation such as this is considered undesirable, then it would be preferable for the period of appeal to be set by regulation, since regulations may more easily be amended than the act.

Other provisions within the act which might, more conveniently, be dealt with by way of regulations are as follows:

- 1- the provision that the Commissioner shall prepare an annual report for Parliament (s 27);
- 2- the deadline for completing an application or for responding to an office action (s 32);
- 3- the requirement that the applicant file a duplicate specification with an additional or third copy of the claims (s 35);
- 4- the requirement that drawings must be submitted, in duplicate (s 39);
- 5- procedural prerequisites to registration of assignments (ss 52(3), 53(3));
- 6- the prerequisites for executing and filing a disclaimer in duplicate (s 51(2));

- 7- the contents of applications filed for compulsory licences (s 70);
- 8- the procedures for obtaining compulsory licences (ss 69-71);
- 9- the procedure of forfeiture and restoration arising on nonpayment of final fees (s 75); and
- 10- provisions for extending time limits and deadlines for filing applications (s 81).

PART III - POLICIES APPLIED IN THE PROPOSED LAW

In part II it was indicated that the proposed law which is to be in effect during the initial ten-year review period would be of traditional form. However, it has also been indicated that this proposed law would introduce significant revisions over the present patent act.

In order to assist readers in understanding and evaluating the proposed law, parts III and IV of this working paper provide two separate forms of analysis. Each part reviews the provisions of the proposed law from a different perspective.

Part III analyzes the proposals from the viewpoint of the express policy objectives which have been consistently applied throughout the entire structure of the draft act. Part IV analyzes the individual chapters and sections on a more detailed basis.

Ultimately, the final version of the law drafted in statutory form by the Department of Justice and passed by parliament will become the law of the land. However, the observations contained in parts III and IV may form a useful background to understanding the issues and policy objectives that must ultimately be settled in establishing a new law.

N General Summary of Policy Objectives of the Proposed Patent Law

It is apparent from the analysis in part I of this working paper that no definitive conclusion on the worth of the patent system is yet possible. Therefore, a draft patent law has been prepared on the basis that Canada will continue in the near future to retain a traditional form of patent law. The draft law is traditional in the sense that it continues to rely for its economic effect on the incentive character of granting a private monopoly.

While the evaluation of the patent system was approached from a critical viewpoint in part I, the decision was nevertheless made to prepare proposals for a law which will continue to rely on the granting of traditional patent rights. The draft law has, nonetheless, been carefully constructed to ensure that those rights are rationally defined.

Patent rights have been reshaped and redefined in the proposed law to reflect the principle that such rights are intended to serve as an incentive/reward for research, disclosure and innovation relating to new inventions. The law is structured in order to increase the worth of patents as an economic instrument and, in particular, adopts provisions to improve the validity of patents; the rights of patentees, however, have been limited in order to minimize the cost to society of maintaining the patent system. These rights are also qualified in view of the fact that the Canadian patent system is largely dominated by the participation of foreigners.

The proposed law has built into it an information-gathering potential which is designed to allow the operation of the law to be monitored in the future. Such a mechanism will assist policy advisors in developing a better understanding of the ultimate worth of the patent system.

By extensive reliance on the regulation-making power of the Governor in Council, the proposed law provides Canada with the capacity and flexibility to accommodate future international developments and to adjust and adapt its law in technical respects as the need for change arises.

Although recognition is given under the draft law to acknowledging the importance of research and disclosure as useful objectives, the proposed law should not be understood to be focused exclusively toward seeking to further those ends.

Rather, the proposed patent law has been based on the assumption that the patent system, notwithstanding the overwhelming participation of foreigners, has the potential to be of significant benefit to Canada if it can be made to serve as an effective instrument in assisting the transfer of technology and if it can promote the development of Canada's technological capability. This object will be advanced through the encouragement of innovation in Canada. Special provisions affecting importation, however, will reduce the incentive impact of the patent law in cases where Canadian industry is not likely to be internationally competitive.

Finally, in accommodating the dominant participation of foreigners, the proposed law has been prepared on the assumption that the Canadian patent system should be structured on the basis that the rights accorded will advance Canadian interests, but without any provisions which discriminate against foreigners. This is in recognition not only of Canada's commitments under the Paris Convention, but also in the hope that foreign participation in Canada's patent system need not operate against Canadian interests if the patent law is properly defined.

0 Summary of Policies Specifically Applied in the Proposed Patent Law

The first parts of this paper have set out an extended review of the various issues which should form a background to formulating a new patent law for Canada. While some of the policies adopted in the proposed draft law incorporated in this working paper may have been indicated in part II, part III of the paper develops explicitly the policies which are applied in the proposed legislation.

For ease of reference the detailed policies applied in the proposed patent law are summarized as follows:

1. the proposed law is to operate as an interim law only, pending further evaluation of the worth of the patent system to Canada;
2. the patent system and users obtaining benefits under it should be expected to provide information on the actual operation of this law in order to develop better public understanding of the costs and benefits to Canada of maintaining a patent system;

3. structurally, the proposed law relies on extensive use of the regulation-making power of the Governor in Council, allocating not only procedural matters, but also details of a complex or technical nature to be governed by regulations.
4. recognition is given to the contribution of inventors and corporations which carry out research and disclose new inventions by granting a monopoly right for a limited term. Where patentees are able to carry through with the process of innovation by arranging for the working of new inventions in Canada, a further extension of the patent term will be available;
5. in order to avoid encouraging the establishment of inefficient industry in Canada, the patent right will permit free importation into Canada of goods originating with the patentee or persons related to him, once such goods have been marketed anywhere in the world;
6. rights granted under patents are intended to be no greater than necessary to support the goal of encouraging research, disclosure and innovation in Canada and are designed to reduce as much as possible, consistent with the other objects of the legislation, the cost to industry and to consumers of maintaining the patent system;
7. patent rights will be subject to provisions to improve their validity and therefore their value as an economic instrument serving as an incentive for research, disclosure and innovation in Canada;
8. the impact of enforcement of patent rights on infringers has been moderated to minimize the injury or loss which may arise out of such enforcement. Provisions are also included to provide alternatives to litigation as well as to reduce the likelihood of litigation and the costs of enforcing patents;
9. the value of the patent system as an instrument of information policy is advanced by provisions requiring earlier and improved disclosure relating to inventions;
10. provisions are included to protect Canadian interests in inventions made by employed inventors, and by corporations working prior inventions under licence and to assist the individual private inventor.

Although not developed in the format of a draft act, three further topics involving matters of policy will require consideration as part of patent law revision. These further topics are:

11. the structure of the Patent Authority referred to throughout the draft law; and
12. the use and relationship of the patent right in respect to offences under the Combines Investigation Act;
13. the transition provisions which are to apply upon adoption of the new law.

Proposals will be made in respect of each of these topics, suggesting a direction for the policies that should be applied in completing the provisions for a new patent law.

P Analysis of Policies Applied

The material under this heading deals with each of the thirteen topics set out under the heading "K Summary of Policies Specifically Applied in the Proposed Patent Law".

P.1 Ten-Year Review

1- The proposed law is to operate as an interim law only, pending further evaluation of the worth of the patent system to Canada;

The Economic Council concluded its report with the observation that the subject matter of industrial and intellectual property (p 220):

"-- had been lying about for much too long undisturbed... (and)... This should not be allowed to happen again".

The Council recommended that a comprehensive public review should be made of policies in these fields at least once a decade. The criteria for such a review were that it

"should cover the goals of the policies, the means employed for attaining them, and careful evaluation of the effectiveness of these policies in serving the evolving needs of Canadians."

It is understandable that parliament should find difficulty in the field of patents. The issues are complex and definitive facts upon which to reach decisions are sparse. But this is no justification for continuing neglect.

The issues that should be reviewed with respect to the patent system are basic. Is it in Canada's interest to maintain a patent system? Is membership in the international patent system worthwhile? Are there better alternatives, such as a modified inventor's certificate system? Or should the patent system be retained with or without drastic amendments to its basic structure?

These are all matters of fundamental policy that merit review by parliament itself. The creation of rights in intellectual property is one of the unique powers of parliament. Once created, such rights pass into the control of private citizens and thereafter belong to them as a form of private property. Such property rights have tended, once created, to be perpetuated.

The proposed law includes provisions requiring the minister responsible for administering the act to prepare a report on its operation after a ten-year period, and to lay that report before parliament (s 3(2)).

The draft law also stipulates that, unless parliament acts after the ten-year period to extend, vary or affirm the law, the actual granting of patents will cease (s. 7). This will not mean that the law itself or rights under issued patents or even the right to apply for a patent will cease. Rather, it will cause a backlog of allowed but unissued patent applications to start to accumulate if parliament fails to take steps to amend the law.

Of course it is expected that once the act has been in operation for ten years parliament will act and undertake a review of the ministerial report which will then be available. But, just as under the Bank Act (s. 6), parliament will have decided in advance that legislative review of the existing law is a matter of importance that should not be neglected. These provisions in the proposed law will ensure that parliament will be encouraged to reexamine the Canadian patent system without undue delay.

P.2 Information Policy

2- The patent system and users obtaining benefit under it should be expected to provide information on the actual operation of this law in order to develop better public understanding of the costs and benefits to Canada of maintaining a patent system;

The Economic Council recommended that (p 89):

"Certain basic information about all licences... granted under Canadian patents should be made available... and kept in a public register".

The proposed law includes provisions implementing this proposal. But the law goes further, requiring patentees to supply information at various stages during the life of the patent.

The entire report on intellectual and industrial property was based on the theme that these property rights are, in reality, part of a larger overall information system in Canada. It would be ironic if the law were to create patent rights as an incentive for the generation and dissemination of information, and at the same time hesitate to require from users of the system essential information on its actual effects and the nature of its operation.

There is thought to be a great reluctance on the part of industry to disclose facts on how internal business activities are carried out. Just as privacy is the right of every citizen, it is argued, manufacturers are entitled to carry on business without any duty or obligation to disclose publicly their activities. But the use and exploitation of the patent right cannot qualify as a 'private' activity that should be kept sequestered out of public view. Rather, because it is a private right granted by the state, full information disclosure on the actual use of that right should be adopted as a principle to be applied to all persons benefiting under that right.

Under the proposed patent law, the minister will eventually be responsible for preparing a report for parliament on the actual use and operation of the patent law. This report should be based on facts and, where possible, drawn from the best information available; otherwise parliament will not be able to properly fulfill its rôle.

O.J. Firestone received ostensible cooperation from 50% of the patentees solicited in his survey (p 381). The Cambridge survey was based on a statistically selected sample of 150 firms, but only 44 firms agreed to assist or cooperate in some respect (p 371). Such partial surveys will always be subject to the charge that they are incomplete and therefore unreliable. In order to meet such objections, firm but flexible information-gathering powers specific to the patent system have been proposed under the draft law.

It is proposed that patentees and patent applicants will be required to supply prescribed information as required under regulations made by order in council:

1. at the time that applications are filed (s 31);
2. at any time during the pendency of the application before the patent office (s 42(4)e);
3. at regular three-year intervals from each application's priority date over the full term of the patent (s 26);
4. at the time that any transfer of an interest in a patent or application occurs (s 81),

and at such other times as are prescribed by the minister and in cases where statistical or sampled data are required (s 26). Further, after the ninth year from the priority date, patentees will be required to provide details when requested on the extent to which their inventions are being worked in Canada (s 27).

Disclosure of information is already a requirement in certain cases under present law (ie prior art cited in foreign countries - rule 39; mandatory registration of assignments or exclusive licences - s 53(2); whether the invention is being worked in Canada - s 66(1)a). But such particulars do not constitute a sufficient base upon which to analyze and evaluate the operation of the patent system. The full scope of information-gathering power which would be approved by parliament under the proposed law would fully cover the activities of patentees in respect of the use of rights under Canadian patents.

Details on how the information-gathering power established under the act will be exercised is left to be subsequently prescribed. But regulations would still be subject to the review and scrutiny of parliament, pursuant to the special prepublication procedure proposed under the draft law (s 4(4)). The immediate issue to be decided by parliament, as a principle of the Canadian patent system, is that industry, in benefiting under the law, should also be required to provide information available to it on the actual use it makes of such rights.

P.3 Regulation Powers

3. Structurally, the proposed draft law relies on extensive use of the regulation-making power of the Governor in Council, allocating not only procedural matters, but also details of a complex or technical nature to be governed by regulations.

Normally the drafting structure of a proposed law would not be included in an analysis of the policies applied in formulating that law. However, such extensive use has been made of reference to matters which are left to be prescribed by order in council under the proposed law that this method of statute drafting deserves special comment.

Some of the main reasons usually given for parliament to delegate legislative power to the Governor in Council include:

1. pressure on parliamentary time -- parliament should conserve its time to enable it to focus its attention on essentials and on matters of general policy and principle;
2. the technical character of modern legislation -- as a body, parliament is not structured for efficient consideration of complex matters of technical detail; and

3. need for flexibility -- the law must be capable of adjusting to meet changing circumstances and of being clarified or corrected when the courts have difficulty in interpreting the statute itself.*

The subject of delegated legislation was examined in 1968-69 by a Special Committee of the House of Commons on Statutory Instruments under the chairmanship of Dr. Mark MacGuigan. This Committee produced its third report in 1969 and new legislation, the Statutory Instruments Act, 19-20 Eliz II c 38, was passed in 1971. The central issue respecting delegation of parliamentary power were summarized in submissions made by Professor H.W. Arthurs, Dean, Osgoode Hall Law School, before this Committee in the course of its deliberations. Professor Arthurs stated:

"The problem of course is basically the problem of the degree to which parliament itself must assume responsibility not only for articulating policy but for filling in the details of that policy in the manner of its implementation."

Professor Arthurs' advice was:

"... there ought to be the broadest possible mandate for regulation-making... and parliament ought to confine itself so far as possible to the announcement of broad policy lines within which that regulation-making shall operate, and to scrutiny of the regulations once made..."

(Minutes of Proceedings House of Commons Committee on Statutory Instruments, No. 2, Tuesday, April 22, 1969, p 10).

In drafting the proposed law, the viewpoint expressed by Professor Arthurs has been adopted. The unusually complex nature of patent law makes the extended use of the regulation-making power particularly appropriate.

Regulation powers with respect to procedural matters are common in Canadian statutes. This policy has been continued in the proposed law with respect to procedural matters, but it has been applied with respect to matters which may govern or affect substantive rights. Examples of use of regulations with respect to the establishment of important time limits under the proposed law are as follows:

1. the period of permitted secret commercial use of an invention beyond which a bar to grant of a patent arises - (s 15(1));

* (See Craies on Statute Law, 7th edition, 1971, (p 291).

2. the period of grace for applying for a patent where an unintentional publication of the invention occurs - (s 16(1));
3. the period of time following the first filing in a foreign convention country for filing in Canada with benefit of convention priority (presently twelve months under the convention) - (s 33(2));
4. the period of time after which a patent application becomes published, irrespective of the stage of examination - (s 40(1)); and
5. the period of time during which claims in an application may be amended to enlarge the scope of protection (s 38(3)).

All of these time periods involve highly technical matters which may be subject to change according to international developments or to the recognition of a need for change in Canada. By assigning time periods to be fixed by regulation, Canada will be able, if desired, to make these changes and bring its law into harmony with the international system without resorting to passage of a bill in parliament.

Under s. 4(3) any time period established by regulation may be subject to variation or extension by the commissioner to the extent provided by regulations to make provision for such hardship cases as postal strikes, errors by the patent office or by applicants. The extent to which the commissioner is given this discretion can always be varied promptly without repeated resort to parliament but will still be subject to parliamentary review under the regulation-making process.

Further substantial matters of a procedural character assigned to regulations include the standard of disclosure in patent specifications (s 34) and the procedure for examination of patents (s 42). These, too, are complex matters, better left to the more flexible procedures of the regulation-making process. Each requires special legislative treatment.

The disclosure requirements for patent specifications is a matter of considerable concern to patent draftsmen and to persons concerned with litigating the validity of patents. Both the present law and the proposals of the Ilsley Commission set out the standards for disclosure in the act.

What s 34 attempts to do is to establish the principles or objectives for disclosure of inventions in patent specifications without giving the words of the act an absolutely binding nature which could only be corrected or varied by reference to parliament. These are exceedingly technical matters and both the patent profession and the courts will benefit from a law which can be modified, corrected and amplified through passage of regulations.

The adoption of deferred examination has been left open under the draft law. Although provisions permitting the deferment of examination may seem to be a matter of substantial importance to industry and the patent profession, the only issue which should be considered in principle by parliament is whether provision for creating such an examination system should be established. Section 42(4) establishes this principle, but leaves the detail to be worked out with the advice and cooperation of industry, in the course of preparation of the draft regulations.

Deferred examination is already in operation in a number of countries around the world. Its establishment through the regulation-making power will enable changes and adjustments to be made more easily as the need arises and as we learn from the experience of others.

Section 42(5) also makes provision for the possible future adoption by regulation of examination results based on applications for patents before foreign patent offices which carry out examinations based on principles similar to those established under Canadian law. Adoption of such examination results would relieve some of the examination burden at home and enable the patent office to divert resources to technical information services.

Moving from procedural rights of substance to matters of unquestioned substance, s 17(3) gives the Governor in Council express power to further define or extend the list of exceptions to patentable subject matter. This type of provision was considered in the UK by the Banks Report which proposed that the statutory list of included and excluded patentable subject matter should be alterable otherwise than by full-scale legislation (p 65).

Difficulty has been experienced by the courts in the past in determining what is intended under the legislation to qualify for the grant of a patent. The proposed draft law adopts the European Patent Treaty format of an omnibus definition of granting patents for inventions "susceptible of industrial application" (s 10), and then qualifies this by a list of express exceptions (s 17). The technical nature of such exclusions justifies resort to regulation rather than reliance on the future ability and the interest of parliament to correct the law as the need is recognized or arises.

In a similar vein, the definition of what shall constitute adequate working of an invention in Canada sufficient to support extension of the patent for a second portion of the term is qualified under proposed s 27(4)b as being subject to variation by regulation. This same feature is introduced in the definition of "work on a commercial scale" under the new compulsory-licence provisions, s 53(8)b, and under s 22(2), whereby a patentee may exclude the importation to Canada of goods which have been produced by patented processes abroad if the invention is being worked in Canada.

A definition of what constitutes the working on a commercial scale of a patented invention has been in the Canadian patent law since 1935. This definition reads:

"work on a commercial scale" means the manufacture of the article or the carrying on of the process described and claimed in a specification for a patent, in or by means of a definite and substantial establishment or organization and on a scale that is adequate and reasonable under the circumstances",

While this definition may be of some guidance to a judge or tribunal, it is not precise or predictable. Such imprecision may in many cases be desirable, since it will allow a flexible and realistic application of the law. But some control should be maintained over the interpretation of this key expression and this is best provided through making it subject to regulation. Section 27(5) provides a limitation on this power to moderate the retroactive effect of adjustments to this key definition.

Other areas of the proposed law which are of a substantive nature and which are proposed to be subject to definition, variation or extension by regulation are as follows:

1. conditions which may be imposed on issuance of a certificate for use in prevention of importation of products prepared abroad by a patented process (s 22(3)d);
2. extensions of the definition of related persons over which exhaustion will apply (s 25(3));
3. particulars of information returns to be filed in conjunction with payment of maintainance fees (s 26(3));
4. criteria for setting royalties under licences to import, manufacture or distribute pharmaceuticals (s 55(3)); and
5. conditions constituting unreasonable terms and unfair prejudice for the purposes of granting compulsory licences (s 57(3)c).

Under the Statutory Instruments Act, regulations and orders made by the Governor in Council are all subject to the review and examination of parliament. Section 26 of this act provides:

"Every statutory instrument... shall stand permanently referred to any Committee of the House of Commons, of the Senate or of both Houses of Parliament that may be established for the purpose of reviewing and scrutinizing statutory instruments."

Through this mechanism parliament has the power to retain ultimate control over those matters delegated to the Governor in Council.

However, in order to ensure that the public has an adequate opportunity to anticipate and object to proposed regulations, the draft act requires (s. 4(4)) that all regulations must be published at least 60 days before approval by the Governor in Council. Similar provisions may be found in the Broadcasting Act (RSC 1970 c B-11 s. 16(2)) and the Grain Futures Act (RSC 1970, c G-17 s. 5(2)).

In conclusion, throughout the proposed patent law, numerous matters are assigned to be established by regulation. This is done not only to spare parliament the burden of debating minor or complex technical issues, but also to provide for timely and appropriate amendment to these matters as the need arises.

P.4 Object of the Law

4. Recognition is given to the contribution of inventors and corporations which carry out research and disclose new inventions through the grant of a monopoly right for a limited term. Where patentees are able to carry through with the process of innovation by arranging for the working of new inventions in Canada, a further extension of the patent term will be available.

In the past, the patent system has been supported by reference to a series of benefits without the selection of any single express or primary objective.*

In the words of the Patent and Trademark Institute of Canada stated on p 2 of their submission to the Senate Special Committee on Science Policy:

"There has been a tendency to emphasize general statements of object such as, to encourage the advancement of the useful arts, to encourage invention 'or' to reward inventors which tends to conceal the practical value of the system and manner in which it functions."

As a result, it is understandable that there is uncertainty today as to whether the patent system is achieving its objectives. Nevertheless some formulation of objects is necessary.

In establishing the rationale for the proposed patent law for Canada, a series of objects with emphasis on innovation in Canada as a primary goal, has been expressly adopted (s. 3). Features of the new law can be tested from the viewpoint of whether or not they advance these primary goals.

* Section 67(3) of the present act, referring to the encouragement of local working of invention in Canada, is prefaced as only applying for the purpose of determining whether an abuse, as grounds for a compulsory licence, exists.

The objects state expressly the presumption that innovation in Canada, specifically innovation based on new inventions which can be efficiently adopted by Canadian industry, is desirable. The draft act itself limits patentability to inventions which meet the standard of absolute world novelty (s 10-14). An open-ended list of exceptions from patentability is established so that commercial fields which do not require or would not benefit from creation of patent rights will not be affected by the law (s 17).

The objects recite that recognition is to be given to the contribution of inventors and also to patentees who are prepared to introduce new technology by working new inventions in Canada without undue delay. This bipartite objective is implemented by dividing the term of exclusivity under a patent into two segments: first, an unconditional right of monopoly for nine years; second, a further five years conditioned upon actual working of the invention in Canada (ss 26, 27). The expectation is that patentees who control rights over commercially exploitable inventions will be subjected to some incentive partway through the patent term to make arrangements for Canadian manufacturing of the invention, either directly, or under licence to an established Canadian manufacturer.

During the first period of nine years, a patentee will be entitled to exploit his rights by supplying the Canadian market through importation. This will constitute Canada's contribution to the fair costs of supporting the world-wide process of developing new inventions. Where a patentee is unable to arrange after nine years of protection for the production or manufacture of the invention in Canada, the patent will lapse and the Canadian market will be thrown open to any source prepared to supply the invention either by local production or by importation on a competitive basis.

Any Canadian manufacturer interested in adopting the invention would then be able to do so without any obligation to pay royalties or to follow compulsory licensing procedures prior to the adoption of the invention. Where additional knowhow is required, this will have to be obtained from the patentee by means of a negotiated contract or generated at home.

By incorporating a positive incentive for patentees to license their inventions for production in Canada, Canadian industry will be in a better position to benefit from the early adoption of new technology. The benefits flowing from intimate exposure to such new technology include enhancement of Canada's technological capabilities and improvement of the prospects for Canadian industry to participate in or generate further new technological developments.

With respect to process inventions (which often relate to procedures which improve production efficiency), protection will only be available once the improved process has been adopted by industry in Canada (s 22). The effect of this provision is to provide

an incentive for the adoption of new technology in Canada, but only to provide protection where such technology has in fact been adopted in Canada.

By these provisions it is intended that the Canadian patent system shall continue to operate in the future in a manner which is of significant benefit to Canada. The inclusion of special provisions to encourage the working of inventions in Canada is, however, contingent on the adoption of further provisions respecting the exhaustion of patent rights.

P.5 Exhaustion

5. In order to limit the incentive force of the patent right and to prevent encouragement of the establishment of inefficient industry in Canada, the patent right will permit free importation into Canada of goods originating with the patentee or persons related to him, once such goods have been marketed anywhere in the world.

The granting of a patent monopoly by its very nature creates a distortion in the normal allocative process of the free market. In deciding to retain the patent system with its inherent element of private monopoly it is assumed that the resulting allocative distortions are worth the price to society. The benefit perceived is presumed to be the increase in the rate of invention and innovation (and thereby, hopefully the improvement of the general public welfare) that results from the introduction of the patent right.

If the patent monopoly is so complete in its scope that it permits the holder to essentially isolate the Canadian market from all other markets in the world there exists the very real possibility that patentees may practice international price discrimination to the detriment of Canadians. Under such circumstances the Economic Council concluded that Canada would be paying more than her fair share of the world costs of promoting invention and innovation and that the costs of the patent system under such circumstances would exceed the benefits.

By permitting the importation of patented products under the principle of exhaustion, the proposed law will, all things being equal, substantially reduce the possibilities that such international price discrimination can be maintained. Exhaustion will apply where an imported product originates with the holder of the Canadian patent or a firm or individuals related to the Canadian patentee (s. 25). Exhaustion will permit cheaper foreign goods to flow freely into the Canadian market irrespective of the existence of Canadian patent rights in cases where a substantial price differential exists between markets.

Through this mechanism the differential between Canadian and foreign prices for the same article will be limited by the costs of transportation, tariffs and related taxes and not by the existence of private statutory rights which confer the ability to engage in effective price discrimination between national markets.

Provisions implementing the principle of exhaustion in the proposed law have also been introduced on a second separate ground.

The Economic Council showed legitimate concern that any special provisions for encouraging the working of invention in Canada could lead to the establishment of inefficient industrial facilities which, once the protection of the patent monopoly terminated, would be unable to survive in the face of global competition. Canada, as is the case with all other countries, has a finite amount of resources, both human and capital, with which to promote industrial progress and provide for the common welfare. Any intervention by government which tends to distort the normal forces leading to allocative efficiency in the marketplace will effect the rate of substantial costs associated with lost opportunities. For a state as heavily dependent upon trade as Canada, any diversion of resources into industrial sectors that would likely be unable to survive global competition without patent protection represents a substantial cost, both of an immediate and of a long-term nature. In the long run, the diversion of resources to protected industries means that resources that could have been used in other sectors with a greater potential of commercial success will be forever lost.

While the Economic Council recognized that benefits could flow from having patented inventions worked in Canada (through the gains associated with technological knowhow that is acquired by involvement in the innovative process) the Council also stressed that, to the greatest extent possible, the laws of comparative advantage should be allowed to reign unfettered by artificial or hidden constraints. In this manner, the Council perceived that the long-term viability and efficiency of the Canadian industrial structure would be assured.

Correspondingly the adoption of provisions for encouraging the use of new technology by working patented inventions in Canada can only be introduced into the proposed law as long as exhaustion is effective. While the Economic Council warned against the use of the patent system as an instrument for indiscriminately encouraging local manufacturing in Canada, the basis for this concern was the danger of artificially supporting industries which could never become internationally competitive. With exhaustion incorporated as a fundamental feature of the proposed law, this risk will be substantially reduced.

On this basis, the new law has been structured on the assumption that patent legislation can still usefully serve as an incentive to the establishment of innovative production facilities in Canada, but only in those cases in which Canadian production can be carried on so efficiently that the competitive effects associated with exhaustion are not likely to arise.

P.6 Limitation on Rights Granted

6. Rights granted under patents are intended to be no greater than necessary to support the goal of encouraging research, disclosure and innovation in Canada, and are designed to reduce as much as possible, consistent with the other objects of the legislation, the cost to industry and to consumers of maintaining the patent system.

Accepting that the patent system is intended to operate as an economic instrument, serving as an incentive for research, disclosure and innovation in Canada, the draft law limits the patent right to avoid the granting of privileges which fail to serve a useful economic purpose.

The maximum term of protection has been set as 14 years from priority date (ss 26, 27). The term under the present act is 17 years, running from the date of grant of a patent.

If it is accepted that the patent system, as an economic instrument, operates in its beneficial aspect as an incentive at the time that entrepreneurs decide to undertake exploitation of a new invention, then the incentive value of the last years of the patent term must be significantly discounted. Rather than allow some patentees a substantial, possibly excessive benefit from an extended term of protection, (the prospect of which carried little incentive effect when the decision to innovate was first made) a shorter term has been adopted.

In considering the types of rights which should arise on grant of a patent, the concept of protecting a known product produced by a novel and inventive process has not been included (s. 20). A product which is not in itself novel and patentable will generally be free to circulate in Canada, irrespective of its method of manufacture.

The only exception to this proposition will be the reservation allowing patentees to bar importation of such products where the process has been adopted in Canada (s 22). This furthers the objective of encouraging innovation in Canada. Pending the initiation of manufacturing, consumers will be free to acquire known, unpatentable products abroad, irrespective of their method of manufacture. Even when local manufacturing is established, the circulation of such products already within the country will continue free from interference by the patent right.

Another feature of the law which limits the patentee's rights respecting importation is the provision excepting from the patentee's rights the power to restrain Canadian manufacturers from importing patented products which are subsequently exported (s 24(1) e, f). These provisions are incorporated in recognition of the fact that, as an economic instrument, the Canadian patent system is incapable of guaranteeing to Canadian patentees a competition-free environment in foreign markets. Granting the patentee the right to suppress the circulation in Canada of goods

ultimately destined for sale on an export market will not guarantee the patentee the benefits normally associated with an exclusive monopoly. Therefore, such rights can have little value as an incentive. If they cannot serve as an incentive, there is no justification for incorporating them in the law.

The same arguments and policies also apply in respect of the right of patentees against Canadian manufacturers who manufacture products destined for export markets (s 24(1) g). To retain for patentees the power to restrain manufacturing carried on in Canada solely for the purpose of supplying a foreign market would only ensure that foreign patentees gain a special advantage over Canadian patentees, enabling them to use the patent system to prevent Canada from being used as a base to manufacture for the purposes of world trade. Since the power to restrain such manufacturing activities cannot advance the objects of the Canadian patent law, there is no rational purpose for maintaining such rights under Canadian law.

For the purposes of protecting Canadian industry and, in the case of food and medicine, to protect particularly the Canadian consumer, the draft law incorporates extensive compulsory licensing provisions (s 53-55, 57). Generally these compulsory licensing provisions are already reflected in most respects in the present act.

Licences will continue to be available for manufacturing in Canada where the patentee fails to arrange such manufacturing himself (s. 53). Rather than allowing the right of access to such inventions to be tied to the date of grant and thereby be delayed in proportion to the period of time that the patent application is pending, any person will be entitled to apply for a licence to manufacture under a patent in Canada, if it is not otherwise being worked in Canada by the seventh year from the priority date. This will ensure that even before the initial nine-year term is complete, an opportunity will exist for Canadian industry to have earlier access to new technology.

Where Canadian industry can demonstrate that the establishment or development of commercial or industrial activity in Canada is being unfairly prejudiced, licences will be available as of right without delay (s 57). To prevent this right of incentive, its application will be limited to cases of need and to circumstances where the grant of a licence will in fact remedy a prejudicial condition.

Pursuant to the recommendation of the Economic Council, patentees holding rights to complementary technology will be given access to adopt other inventions necessarily involved in the exploitation of their own patents (s 54). This will ensure that companies which invest in research on improvement inventions will be entitled to immediately apply the technology that they have developed. Conversely patentees with rights over basic inventions will be ensured access to apply improvement inventions.

The compulsory licensing provisions respecting food and medicine will also be maintained in substantially their present form (s 55). The procedure for granting such licences will be speeded up by making interim licences available immediately.

The proposed draft law incorporates provisions which will protect persons independently acquiring knowledge of an invention who take steps to invest in its exploitation in Canada (s 50). In the case where a decision has been made independently to adopt an invention without reliance on the need for patent protection, part of the justification for granting a patent right to another who has applied for a patent is absent. Manufacturing is proceeding without the need for a special incentive. The imposition of patent restraints over a manufacturer who was prepared to proceed independently with production without the support of patent protection seems correspondingly unfair and wasteful. Accordingly, the proposed law grants immunity from patent interference to such persons by giving intervening rights with respect to patented inventions.

The intervening right established under the proposed law is a continuing right to use the invention accorded to a person who has commenced to use that invention before it was made available to the public by the patentee. In some countries this is called a right of personal possession. Somewhat similar provisions already exist under the present act, which allow goods produced and stockpiled before the grant of a patent to be sold freely after grant of the patent (present s 58).

In summary, all of the foregoing provisions have been adopted on the basis that no rights should be granted which cannot be justified on the basis of advancing the objects of the law; and where rights are ostensibly granted, they are limited or moderated in cases where the potential loss, cost or injury to Canadian industry or to the consuming public outweigh any contribution that would otherwise be obtained by enlarging the patent right.

P.7 Improved Value of Patents

7. Patent rights will be subject to provisions improving their validity and therefore their value as an economic instrument serving as an incentive for research, disclosure and innovation in Canada.

The proposed draft law recognizes that if patent rights are to serve as an incentive, they should be as substantive and real as possible, within the constraints imposed by the public interest. This policy requires both that the right granted should be effectively enforceable in restraining unauthorized exploitation of an invention, and that the existence of such right will be reasonably certain.

The proposed draft law expressly includes provisions prohibiting acts of contributory infringement (s 21). If the patentee's rights are to have meaning, then the patentee should have the

broadest scope to restrain infringement at any point in the process by which the infringing activity arises. By extending to the patentee the power to restrain acts of contributory infringement, the patentee can take action against manufacturers who supply means suitable for putting the invention into effect but who would otherwise not be carrying on an activity falling within the scope of the claims of the patent.

In conjunction with the early publication provisions of the new law, the proposed act guarantees patentees an interim right to receive compensation for use of the invention prior to actual grant of the patent (s 23). This provision will remove much of the prejudice to patentees' rights that would otherwise arise through early publication, administrative delays in granting a patent and the running of the term from the priority date.

In order to give the patent, once granted, improved status, its deterrent effect against repeated infringers is improved by expressly acknowledging that the court may award exemplary damages against repeated infringement (s 66). This provision will apply in cases in which the patent has already been litigated between the parties or where an earlier dispute has been settled on the understanding that the infringer will not further infringe. The right to exemplary damages, available but rarely applied under the present law, is given express recognition under the proposed law. This right will serve as an alternative to quasicriminal contempt proceedings which may be subject to criminal standards of proof.

Besides incorporating provisions which enhance the rights available to patentees, the proposed draft law also contains provisions directed to improving the validity of patents.

The existing law has always proceeded on the basis that a patent may be declared null and void at any time on the grounds that it should never have been granted. Since the criteria for grant of patent include both standards of novelty and creativity (inventiveness) which depend on the state of the art at the priority date, a patentee, under the present law, can never be sure whether his patent is in fact valid. This uncertainty detracts from the value of the patent as an economic instrument.

Although not relieving the patentee entirely from the prospect of having his patent revoked on grounds of lack of novelty, the proposed law forecloses such an attack after the ninth year (s 75). This will ensure that any patent which remains in force for the extended term of 14 years on the basis that it is being used to support industry in Canada, cannot, during this latter portion of the patent term, be revoked on the technical grounds of lack of novelty. The patent will still remain throughout its full term impeachable on narrower grounds such as insufficient disclosure, false statements provided to the patent office, or use of the patent to commit a combines offence.

In order to assist patentees who believe their patents may be defective by reason of inadequate or incorrect disclosure of the invention, provisions have been incorporated allowing the patentee

to enter substantial amendments to the disclosure at any time, either while the application is pending or even after grant (s 38). Without affecting the scope of monopoly claimed, such disclosures will enable patentees to remove from the specifications defects that might otherwise be seized upon by infringers in order to challenge the validity of the patent. This right to amend will not apply where persons move promptly to challenge the patent before the patentee takes steps to amend voluntarily (ss 39A, 77). The effect of these provisions will be to encourage patentees to correct at an early date patents with defective disclosures.

The validity of some patents is also shadowed by reason of uncertainty concerning the identity of the inventors responsible for the conception of the invention. This situation may particularly arise in a corporate research office where a team has been involved with work leading to the creation of the invention. Accordingly, a looser definition of "the inventor" under such circumstances has been adopted (s 2 and 30(1) c). Further, erroneous naming of persons who are not inventors or failure to designate all of the involved inventors can be corrected both while the patent application is still pending (s 32(1)) and after the patent has been granted (s 39). Where a patentee makes a decision to amend his patent during revocation proceedings or while he is attempting to rely on his patent during the course of infringement proceedings, his right to amend would be subject to the discretion of the judge and to special concessions to other parties involved in the litigation (s 77).

The foregoing examples summarize the more prominent instances in which provisions have been adopted to improve the value of rights granted under patents, in respect of the manner of their enforcement and of patent validity.

P.8 Patent Enforcement and Dispute Settling

8. The impact of enforcement of patent rights on infringers has been moderated to minimize the injury or loss which may arise out of such enforcement. Provisions are also included to provide alternatives to litigation and to reduce the likelihood of litigation and the costs of enforcing patents.

Under the proposed law, liability to payment of damages for infringement of a patent will not arise until a person has had actual notice of the existence of the patent (ss 61(1), 23(2)). This provision has been adopted in pursuance of the policy that where a patent must be enforced, the procedure should be no more disruptive than necessary, consistent with the aim of ensuring that patent rights still have substance.

Further provisions adopted with this object in mind include the right of a person holding a stock of infringing goods at the time that he receives notice of the existence of a patent to dispose of such goods in a manner which does not disrupt the patentee's right to exploit his invention in the Canadian market (s 62).

Even in the case of a person who had wilfully infringed a patent after having received notice and who thereby became liable to payment of damages, the court will have discretion to allow deferred payment of such damages (s 63(3)). This provision will prevent a large monetary judgment in a patent action from unreasonably injuring otherwise legitimate business activities of a defendant. Further, the present procedure by which a defendant may be ordered to account for and pay over all of the profits that he earned in the course of any unauthorized use of a patent has been prohibited as being unduly onerous to enforce (s 63(7)).

No attempt has been made in the proposed law to make recommendations regarding the fact-finding or other trial procedures adopted in the Federal Court. Rather, the law has been prepared on the basis that the Federal Court will constitute the central adjudication body for the enforcement of this particular federally-created right. Opportunities, however, have been established for certain of the technical issues relating to patent validity to be tested by the public before any proceedings are taken in the Federal Court.

Under the proposed law the Commissioner of Patents, as the officer in charge of administering the Patent Act and granting patents under it, will have expertise in evaluating the patentability of alleged inventions. As an alternate procedure to challenging the validity of issued patents before the Federal Court, members of the public will be entitled to intervene to oppose the allowance of applications before they issue (s 43). This provision, made possible by reason of the early publication provisions of the law, may, particularly where examination of an application has been deferred until it has become relevant, allow disputes on the patentability to be fully argued before the patent office without resort to court proceedings. Participation in such opposition proceedings is encouraged by the suspension of the presumption of validity that would normally arise where a patent is allowed if the opposer appeals the allowance to the Federal Court (s 43(8,9)). Furthermore, in proceedings before the patent office both applicants and interested members of the public will have the option of relying on the services of registered patent agents, it is hoped, at lower costs than would be incurred through court litigation.

As a further alternative to litigation before the courts, it is proposed that the patent office be made available to serve as an authority for rendering nonbinding rulings on the relevance of newly discovered prior art once a patent has been granted (s 47). The expectation is that in some cases, in which the main litigious issue between a patentee and alleged infringers is the validity of the patent, the prospects for voluntary settlement will be improved where an independent authority offers an opinion on the relevance of the newly discovered prior art. Again, proceedings of this nature may be carried out by patent agents in the normal course of their business.

Through the foregoing provisions it is expected that the evaluation and enforcement of patent rights will be made less costly and less injurious for patentees as well as for concerned members of the public.

P.9 Improved Public Disclosure of Patents

9. The value of the patent system as an instrument of information policy is advanced by provisions requiring earlier and improved disclosure relating to inventions.

The present patent law contains substantive requirements with respect to the disclosure which must accompany a patent application. The proposed law continues this policy and, in particular, requires the applicant to describe both the invention, ie: the principle or technical effect by which it achieves its beneficial results, and the best modes known to the applicant for applying the invention to useful ends (s 34(3)). The ability of the applicant to meet this standard of disclosure is enhanced by a generous right of amendment, allowing the patentee to upgrade his disclosure (but not necessarily the scope of monopoly) at any time during the application stage or during the life of the patent (s 38).

While the incidence of misleading disclosures in patents may not be substantial, a provision making patentees liable for any false statements relied on by third parties and resulting in loss or injury is incorporated into the law (s 37). The expectation is that all persons interested in acquiring rights under a patent will be motivated to insist that any aspects of the disclosure which are insufficient, ambiguous or potentially misleading be corrected.

Not only is it important that inventions be fully disclosed, but it is also desirable that they be disclosed at as early a stage as possible. Under the proposed draft law, provision has been made to publish pending applications at a fixed period after priority date irrespective of the stage of examination (s 40). Even earlier, bibliographic data on the existence of the application will be published immediately after receipt of the application by the patent office (s 40(4)).

Following publication, any further amendments that the patentee makes with respect to either his disclosure or his claims will be available for immediate public inspection. This will ensure that members of the public contemplating adoption of an invention will be able to determine at an early state whether a potential monopoly may subsequently issue from the patent office, adversely affecting investments they may have made.

Finally, as part of the policy of encouraging patentees to disclose publicly the disposition of rights under patents, registration of any grant of an interest in a patent or application is made mandatory (s 81). This obligation is sanctioned by denying the patentee the right to claim damages for the period during

which there was a failure to register a transferred interest under a patent (s 64a). It is further sanctioned by a declaration that no monies are payable under any licence in respect of which there has been a default to register (s 82(3)).

On the basis of the foregoing provisions, it is anticipated that the patentee will be encouraged under the new law to make a full disclosure with respect to his invention and use of his patent rights at the earliest opportunity, pursuant to the public interest.

P.10 Transfer of Rights in Inventions

10. Provisions are included to protect Canadian interests in inventions made by employed inventors and by corporations working prior inventions under licence, and to assist the individual private inventor.

The greater portion of inventions presently being made throughout the world originate in corporate or research institutes with ownership or control over such inventions passing to employers. In Canada, in a substantial number of cases, such rights may be passing either to foreign corporations or Canadian subsidiaries of multinational enterprises.

As subsequently detailed under the heading of competition policy, the proposed law contains an express prohibition against the assignment or transfer of any rights in future inventions of unknown value (s 80(4)). This provision, by itself, would be totally incompatible with the rôle of the employed inventor. In order to accommodate the realities of the invention-making process in the modern context, the proposed draft law contains a specific exception to the above general prohibition, vesting rights to inventions in the employer where an employee makes an invention while acting within the scope of his duties (s 86(2)).

This provision largely reflects the present common law in Canada with respect to persons who are employed for research purposes or have senior status within a corporation. It will, in the absence of a written agreement, protect and reserve the benefits of such inventions to the employer.

Rights in future inventions may also be assigned by employees to their employers by way of a written agreement (s 86(2)b). Unlike the present law, rights are only assignable with respect to inventions associated with the employee's employment and, further, will not be permitted with respect to inventions made, at the latest, 12 months after termination of employment. Where rights in an invention have vested automatically in an employer by reason of the above provisions, provisions have been adopted which will give the employed inventor an opportunity to recover his rights if the employer is not prepared to pursue them further (s 86(3), (4)).

The combined effect of these provisions should be to increase the awareness and interest of both management and employees in the proper management and early exploitation of new inventive ideas.

In this manner, the patent law will be contributing toward creation of a general environment in Canada which is conducive to innovation.

While the foregoing provisions apply to the transfer of rights in inventions between employees and employers, provisions are also incorporated in the proposed law governing the transfer of rights between parties to licensing agreements. Under the proposed law the general prohibition against assignment of rights in future inventions will operate to ensure that industry, as a condition to obtaining rights to apply technology under licence, does not consent to loss of control in advance over improvement inventions made in the course of applying such licensed technology in Canada (s 80(3)). In recognition of business practicalities, however, the right of a licensor to negotiate for at least a nonexclusive licence under improvement inventions has been preserved (s 87(1)). Furthermore, where parties jointly carry out research, they will be entitled to allocate such future right as may arise between them (s 87(3)).

Both of these provisions operate as exceptions from the background prohibition against assignments of rights in future inventions of unknown value. The more general prohibition will assist in reserving to Canadians, as much as possible, discretion over the disposition of rights in inventions made in Canada. At least, when rights in such inventions are transferred, such transfers will take place once the invention has been made and an estimate of its potential value is possible.

A further provision in the draft law directed to protecting inventors is contained in the prohibitions respecting patent agent services (s 98). These prohibitions extend beyond the provisions of the present act, which are limited to proceedings before or transactions with the patent office. The combined prohibition and registration provisions of the proposed law will permit supervision of the further steps of representing applicants before the patent offices of foreign countries and the provision of the services of an 'invention broker' in relation to the exploitation of inventions either in Canada or abroad. These provisions are incorporated in recognition of the fact that foreign rights respecting the exploitation of inventions are at least equally and probably more important to Canadian interests than the rights which can be obtained in Canada under the patent act. Accordingly, the same arguments justifying government supervision of patent agents under the present law apply as against these other activities.

The proposed law also contains provisions to assist the private inventor or small corporate patentees. While participation by these types of patentees in the Canadian patent system is minor, they represent a class for which the acquisition of patent rights can have considerable significance. Special government programs to assist such patentees are more properly activities which should fall under the jurisdiction of other government departments. The

proposed law does, however, contain provisions which may complement such programs as may be established by the Department of Industry, Trade and Commerce.

While a system of provisional applications has not been adopted, generous amendment provisions and the right to claim priority on the basis of prior Canadian applications will have a similar effect (s 34(1)). Applicants will therefore not be forced to file complex and perfect applications in the first instance. A program for deferral of fees will also be possible (s 4(1)g (vi)).

While provisions of this type will result in only modest assistance to private inventors and small corporate patentees, their operation will produce further information on the needs of this special class of patentees.

Q Consideration of Further Matters

Q.1 Patent Authority

The structure of the Patent Authority referred to throughout the proposed draft law has not been specifically dealt with in the format of a proposal for draft legislation. This tribunal is, however, an important feature under the new law.

Under the present law the Commissioner of Patents is given extensive powers to decide various kinds of disputes. Besides being ultimately responsible for the decision whether a patent application will be allowed to issue, the commissioner is also responsible for the issuance of compulsory licences (present ss 41 and 66-71). This involves deciding whether an invention is being worked on a commercial scale in Canada, and whether industry is being unduly prejudiced. The responsibilities of the commissioner are therefore divisible into distinct categories.

The proposed law has been drafted on the basis that it will continue to be the responsibility of the commissioner to administer the patent office and to apply the Patent Act with regard to the examination of patent applications. It is expected that the commissioner will, with his staff, be experienced and expert in the procedure of evaluating whether applications qualify for grant of a patent. Nevertheless, all but the most direct and uncontentious fact-finding responsibilities have been removed from his jurisdiction in order to permit the commissioner to devote his attention to this primary responsibility - supervision of the patent-granting process.

As indicated earlier, issues of fact and the decision on whether facts constitute sufficient grounds to activate provisions of the law are generally assigned to the Federal Court of Canada. That institution, as a court of law which proceeds on the basis of the adversary system, is the appropriate forum for investigating

complex issues of fact and applying principles of law. Accordingly infringement, revocation and similar proceedings have been assigned to the Federal Court.

Certain provisions under the proposed draft law entail issues which go beyond the mere determination of fact and application of law. Questions involving evaluation of matters of an economic nature, or having a significant policy element, or being of a particularly complex technical nature, have been allocated to be dealt with by an administrative tribunal. Examples of matters assigned to this Patent Authority under the proposed law include:

1. whether an invention is being worked in Canada on a commercial scale (ss 22, 27, 53);
2. whether the holder of a patent covering complementary technology really needs access under a prior patent in order to exploit his own inventions (s 54);
3. whether commercial or industrial activities in Canada are being unfairly prejudiced by the licensing policy of a patentee (s 57);
4. the amount of compensation payable in recognition of a patentee's interim rights after publication and before grant of a patent (s 23);
5. the amount of compensation payable for use of an invention by Her Majesty (s 56); and
6. the amount of royalty payments due under compulsory licences (ss 53, 54, 55 and 57 as determined by s 58).

To the extent that the issues to be decided by the Patent Authority are not purely judicial matters but require the application of economic standards, they are clearly not appropriate for a court. A court is not normally entitled to carry out any investigations on its own account. Rather, it must rely upon the quality of information presented by the respective parties that appear before it.

Where complex economic issues are involved affecting the general public interest, it is preferable to assign these issues to an administrative tribunal which has the resources and inclination to develop its own expertise in the field of its responsibilities. This freedom, the ability to acquire information independently and to define a policy where one did not previously exist, is an essential distinction between an administrative tribunal and a court of law. It is not merely a matter of ensuring that the decision making authority is a technical, specialized one in the field in which it must make decisions. Rather, the generation and re-evaluation of policy is a continuing exercise which is likely to proceed best under the structure of an administrative tribunal.

No express suggestion has been made in the draft patent law concerning the appropriate structure for the Patent Authority. Various possible arrangements will, however, be suggested as a basis for discussion.

Consideration could be given to designating a panel of the Restrictive Trade Practices Commission to act as the Patent Authority. This would have the advantage of drawing on the experience of individuals who are continually exposed to economic issues involving the operation of the marketplace. The experience of members of this panel in other aspects of competition policy would assure that it would be continually aware of the general public interest which may be involved in its decisions. Conversely, members of the Restrictive Trade Practices Commission who sit as part of the Patent Authority would benefit from exposure to the interests and concerns of industries which are legitimately pursuing the exploitation of their patent rights. This alternative has the further advantage of utilizing the resources of an already existing body.

Another alternative would be to establish the Patent Authority as an independent body, either reporting directly to the Minister of Consumer and Corporate Affairs in the same manner as the Restrictive Trade Practices Commission, or operating within the Bureau of Intellectual Property. In either case, the Patent Authority would ultimately report to the Minister of Consumer and Corporate Affairs as the person responsible for the maintenance and operation of constraints and provisions controlling the operation of the marketplace in Canada. This proposal, while it would result in the creation of a new body, could provide for some of the expertise developed within the Department of Consumer and Corporate Affairs to be made available to assist the Authority in its responsibilities.

A further alternative structure for the Patent Authority would be to constitute a special judge of the Federal Court, preferably selected on the basis of background experience or expertise in matters relating to economics, competition policy and industrial property law to sit as a tribunal. This step was taken in the UK with the creation of the Patents Appeal Tribunal in 1949 following the recommendation of the Swan Committee. Sitting as the Patents Appeal Tribunal, a special judge of the High Court hears all appeals from decisions by the UK Comptroller of Patents, including those on whether or not a patent should be issued (or should be revoked during the one year postgrant opposition period) as well as reviewing decisions relating to compulsory licence applications.

If a special judge of the Federal Court were appointed as the Patent Authority, it may be necessary to establish an independent staff to assist him in the research and policy generation aspects of his responsibilities. Again, this staff could be created either within the Department of Consumer and Corporate Affairs or independently of that department, but in any event reporting to that Minister.

As a final alternative, a mixture of the foregoing proposals might be considered. The Patent Authority could be constituted by three persons one of whom would be a judge of the Federal Court, and the other two persons being drawn from a slate of persons with expertise or experience in the fields of economics, industrial property law or competition policy. This is similar to the formula for the present structure of the Copyright Appeal Board, established under section 50 of the Copyright Act. It is also the structure proposed in the most recent UK White Paper for Patent Law Reform for a new court to replace the Patents Appeal Tribunal.

This last proposal has the advantage of assuring that the Patent Authority will have at least one member who is experienced in the procedures of public hearings and capable of supervising the presentations of evidence which will form the basis of the tribunal's decisions. The other members would ensure that the Patent Authority has the background, resources and expertise to meet its quasijudicial policy-making responsibilities.

Whatever the precise structure of this tribunal, its rôle under the proposed law will be to assume many of the more complex non-judicial responsibilities now assigned to the Commissioner of Patents. It is expected that this separation of administrative and quasijudicial rôles will enable both the Commissioner and the Patent Authority to carry out their respective functions more efficiently.

Such a tribunal may also be appropriate to assume similar responsibilities under other intellectual property laws.

Q.2 Competition Policy

The proposed draft law does not deal expressly with activities which constitute excessive anticompetitive use of patent rights. Reference is made in the proposed draft law to the use of patents in relation to offences under the Combines Investigation Act (s 71(g)). That reference incorporates as a sanction in the patent law provisions for revoking a patent where the patent has been used to facilitate an offence under the Combines Investigation Act. But the criteria defining what constitutes use of patent rights sufficient to merit prohibition on grounds of competition policy have generally been left to be established under the Combines Investigation Act.

The provisions of the Combines Investigation Act relating to patents are now under review as part of the government's program to amend the competition law in general. Bill C-227 introduced before the 28th Parliament in 1973, contained a proposal for revision to s 29 of the Combines Investigation Act, the section which now applies to patents. An effect of that proposed amendment would have been to change the present provisions, which apply wherever patent rights are used to interfere unduly with specified market activities, into a remedial section which would apply wherever use had been made of a patent to commit any offence against the substantive prohibitions of that act. The amendments

as finally adopted did not include changes to section 29, but changes in this regard are anticipated as part of further general revision of the Combines Investigation Act.

While it is not the purpose of this paper to review the limits on fair use of patent rights in defining competition and restrictive trade practices policy, a few provisions relating to competition policy have been adopted in the proposed draft law and therefore some comments on the nature of the issues are included.

The Combines Investigation Act contains in its definition of "monopoly" an express exception as follows (s 2):

"... a situation shall not be deemed a monopoly within the meaning of this definition by reason only of the exercise of any right or enjoyment of any interest derived under the Patent Act, or any other Act of the Parliament of Canada."

The effect of this reservation appears to protect any patentee who is merely exercising his rights under a patent from being guilty of a monopolization offence under the combines law. If it were not for other provisions of the law it would appear to be the right of a patentee to withhold his consent from the doing of any of the acts reserved to him upon grant of a patent. Under the draft law this would extend to the acts referred to in ss 20 or 22.

At first glance, it might seem difficult to conceive how, by the mere withholding of consent, a patentee, without ulterior motive or effect, (apart from advancing the exploitation of his invention) could only qualify as using his patent rights to facilitate an offence under the combines law. Similarly, if the patentee were to grant an unrestrained, unqualified consent to carry out all of the acts that he is permitted to authorize under ss 20 or 22, the prospects for the commission of a combines offence would seem equally unlikely. But the law already acknowledges that the mere exercise of the patent right, in certain circumstances, may be intolerable.

The original Statute of Monopolies excepted from its otherwise general prohibition of monopolies the granting of patent rights only:

"... so as also they not be... mischievous to the state by raising prices of commodities at home, or hurt of trade, or generally inconvenient;" (cf supra, p 15) as reproduced in RSO 1897 c 323.

The present Combines Investigation Act, while expressly removing the patent right from the definition of monopoly (and thereby from the provisions prohibiting the formation of a monopoly), contains extensive provisions restraining activities other than those

related to the formation of a monopoly. The prohibitions of present s. 29 of that act contemplate that the use of patent rights may unduly enhance the influence that a patentee may have over the market, irrespective of his monopoly position.

The Patent Act itself has for many years contained compulsory licensing provisions which come into effect whenever industry is unfairly prejudiced by reason of the ability of a patentee to withhold his consent to use of an invention. These provisions will be continued under the proposed law (s 57). The fact that such licensing may be available does not, however, displace the need for provisions which are not contingent on the initiative of individual members of industry to apply for a licence, nor for provisions intended to govern matters which are larger than the interests of industry.

In general, undue injury to competition in the marketplace may arise through use of patents in two different respects. The power of a patentee under the patent right to withhold access to an invention may be so influential, either during its normal term or by reason of effects that persist after its expiration, that it impairs the ability of the marketplace to operate in its otherwise normal fashion. Under these circumstances the mere existence of a patent may serve to enhance or entrench the monopoly position of the patentee in the marketplace beyond the limits contemplated in adopting the patent law. This situation may partly be met by the compulsory-licence provisions of the proposed draft law which make licences available in the public interest where industry is unfairly prejudiced by lack of access to an invention.

A patent right may also be used as a bargaining instrument to influence or control conditions in the marketplace lying outside the scope of monopoly contemplated under the law. It is this latter abuse, associated with the right to license, that has generally attracted the most attention in considerations directed to reconciling the patent and competition laws. One of the main issues which must be considered in determining the boundaries of fair business practice in respect of the use of patent rights is the extent to which patentees may bargain with their right to license an invention.

One method of defining a reasonable boundary to be imposed on licensing negotiations might be to decide that any act which allows the patentee to expand his monopoly beyond the scope of his patent grant should be considered an offence. Alternately, any attempt by a patentee to limit activities not falling within his power of prohibition under the patent might be considered an offence.

The Model Law for Developing Countries on Inventions prepared by WIPO's predecessor, the United International Bureaux for the Protection of Intellectual Property (BIRPI), suggests a statutory provision based on this concept. The model law adopts as a rule for defining prohibited terms or clauses in licence agreements,

the test of whether such clauses impose restrictions "not deriving from the rights conferred by the patent" (BIRPI - 1964 Model Law on Inventions, art. 33).

A series of express qualifications to this rule are, however, added. These qualifications are intended to preserve expressly the patentee's right to impose the following terms:

- (a) limitations concerning the degree, extent, quality, territory or duration of exploitation of the subject of the patents;
- (b) limitations justified by the interest of the licensor in the technically flawless exploitation of the subject of the patent; and
- (c) the obligation imposed upon the licensee to abstain from all acts capable of impeding or preventing the grant of the patent or prejudicing its validity.

The general principle of the model law, together with the listed exceptions represent one view on the type of limitations that a patentee can properly impose as a condition for granting a right of access to a patented invention.

An alternate proposal, listing provisions which arguably should be prohibited in licensing arrangements as attempts at unreasonable extension of the monopoly grant, was set out by Roy Davidson, Senior Deputy Director, Bureau of Competition Policy, Department of Consumer and Corporate Affairs, in a lecture before the Law Society of Upper Canada delivered on June 14, 1974. Mr. Davidson suggested, for illustrative purposes and without intending to be exhaustive, that the following provisions may arguably have the effect of extending the monopoly grant:

- (1) charging royalties on patents they expire;
- (2) other restrictions, relating to the subject matter of the patent or to knowhow, which continue after the patent has expired;
- (3) the requirement that the licensee accept and pay for additional patents (to discourage a challenge to the validity of doubtful patents);
- (4) other tying arrangements such as the obligation to purchase capital goods or raw materials from a designated source or to make permanent use of staff designated by the supplier of the technology;
- (5) obligations to use the distribution channels of the licensor or otherwise to restrict access to channels of distribution;
- (6) restrictions on exports, whether or not the products are protected by patents in other markets;

- (7) higher royalty charges on goods for export versus goods for the domestic market; and
- (8) higher royalty charges to Canadian licensees than to licensees of the same patent owner in other markets.

All of these activities may tend in some respect to extend or entrench the monopoly powers of the patentee either in time, in subject matter or in territory.

A further list of provisions was also offered by Mr Davidson as having the effect of generally entrenching the patent monopoly and exceeding the rights intended to be conferred by the patent grant.

- (1) restrictions requiring that the licensee not contest the validity of the patents involved;
- (2) restrictions on obtaining patents, know-how or trademarks from other companies with regard to the manufacture or sale or competing products (thus prohibiting the use of competing technology);
- (3) restrictions establishing a total or partial purchase option over the business of the licensee in favour of the supplier;
- (4) restrictions requiring the transfer of any inventions or improvements to the licensor;
- (5) cross-licensing which has the effect of reinforcing a tight oligopoly (which is defined as a situation where much of the output of an industry is accounted for by a small number of companies who recognize their mutual dependence and therefore tend to coordinate their policies);
- (6) field-of-use restrictions; | which may have the effect of buying off the most likely challengers to the patent holder, who otherwise might invent around the patent or upset its validity by ensuring the monopoly gains will be shared.
- (7) restrictions on the level of production;
- (8) price-fixing; and
- (9) allocation of exclusive territories.

Consideration of whether provisions of these types should be expressly prohibited under the combines law requires an individual cost-benefit analysis of their impact on the competitive market mechanism, on the one hand, and their effect on the patent system as an incentive instrument, on the other hand.

One test which could be applied might be to evaluate whether such practices are necessary in order to ensure that the patent right still serves as an adequate incentive instrument. If a practice significantly enhances the motivational force of the patent right, then this should be balanced against the costs of permitting such practice. If the privilege of conducting such practices is not of major relevance to persons who might otherwise be expected to be influenced by the patent right, then some other justification will have to be found for allowing a departure from maximum free competition.

It is with these considerations in mind that certain limitations on the patent right relating to competition policy, apart from the compulsory licence provisions of s 57, have been incorporated into the draft law.

Under the proposed law there is a general prohibition against attempts to assign future rights in inventions of unknown value (s 80(4)). This provision is adopted to ensure that future patent rights, except where business practicalities otherwise require, will vest in and benefit the inventor. This provision will protect Canadian industry from consenting to loss of control in advance over improvement inventions made in Canada by Canadian industry in the course of applying technology under licence to a patentee.

The exceptions adopted in recognition of business practicalities include the right of an employer to own the rights in an employee's invention when the making of the invention falls within the scope of the employee's duties or arise in a limited period after termination of employment (s 86(2a)). Other exceptions are the right of a licensor of technology to negotiate for at least a nonexclusive licence under improvement inventions (s 87(1)); and the right of parties jointly carrying out research to allocate such future rights as may arise between them (s 87(3)).

A further provision of the proposed law related to competition policy is the right of a licensee to challenge the validity of the patent under which he is licensed (s 88). This provision is adopted out of consideration for the vulnerable situation of a licensee who must pay royalties under a patent and at the same time face competition from infringers who are not so burdened. If the patent is invalid, any attempt by the licensee to secure enforcement of the patent against infringers will fail. If licensees are not to be placed in a disadvantaged position in the marketplace, they must be allowed the option of challenging the validity of the patent under which they are paying royalties.

These provisions generally reflect the instances where consideration of matters of competition policy have led to express qualifications on the nature of the patent right. Further qualifications may arise in the course of the amending of the Combines Investigation Act.

Q.3 Transition Provisions

Transitional policies governing transitional provisions which apply on repeal and replacement of laws enacted by parliament have generally been based on creating a minimum of disruption to the status quo. These policies need not, however, apply in the case of revisions of the patent law.

Parliament has the power to preserve or abolish all rights or privileges obtained under the present patent law as it deems appropriate. This was, in fact, the purpose and effect of the original Statute of Monopolies passed in 1634. Certain presumptions have, however, been developed by the courts over the years in interpreting statutes. These presumptions operate in the absence of a manifestation by parliament that it intends the contrary.

The basic common-law presumption is that repeal of a statute does not, unless parliament intended otherwise, effect things done under the old law that are past and closed. Vested rights which had already been acquired on the date of repeal are generally presumed to be as unaffected by repeal, unless the act indicates otherwise. Conversely, incomplete transactions that are in progress at the time of repeal are not entitled to the privilege of being treated as if they had been completed.

Most of these common-law principles have been codified under the Interpretation Act, RSC-1970 Chap 1-23. section 35 of that act provides that as an initial presumption, the repeal of an act does not:

"35(c) affect any right, privilege, obligation or liability acquired, accrued, accruing or incurred under the enactment so repealed;"

nor is repeal assumed to:

"35(e) affect any... legal proceeding or remedy in respect to any such right, privilege,..."

As indicated earlier, however, these provisions are merely interpretive directions which apply unless a contrary policy is adopted by parliament. The policy which should be applied with respect to any transition from the present to a new patent law should take into consideration not only the rights of persons under existing patents, but also the public interest.

In making changes in a law which purports to grant rights, the effects of such changes on the beneficiaries of those rights are most easily recognized. The proposed patent law would, if imposed on patents already granted under the present act, significantly change the rights now afforded. In some cases, patentees may have proceeded in reliance upon a certain term of protection, a term which, under the proposed law may be considerably shortened. In other cases, applicants may have filed for a patent in Canada

relying on the two-year statutory grace period presently available to previously publish their invention. To impose the new law completely in such cases may work serious hardship.

But a change in the patent law will also affect the rights that the public has to enjoy and exploit the ideas that would otherwise not be freely available. This change in the scope of freedoms available to society at large should not receive less attention than the position of the patentee when examining the impact that changes in the patent law will have. The consuming public have an interest in acquiring goods from a variety of sources at competitive prices. Canadian industry, as well, may wish to be free to apply new technology at as early a stage as possible.

With these competing interests in mind, formulation of the transitional provisions of the new legislation could proceed on the basis of two distinct alternatives. The first alternative would be to decide arbitrarily that all patents obtained under the old law (and possibly even all applications filed under that law) would continue for the balance of their term to be subject only to the old law. The other alternative would be to subject not only pending applications but even outstanding patents to as many provisions of the new law as is practical.

It is proposed that this latter alternative be adopted. The proposed law has been offered as an optimal compromise between the rights which should be afforded patentees and the public interest in limiting those rights or qualifying them to ensure that the patent system continues to operate in a manner which is beneficial to Canada. Any suspension of the operation of provisions of the proposed law should be limited to those cases in which changes from the provisions of the present law significantly injure patentees or applicants who have proceeded, to their detriment, in reliance upon the present law.

Accordingly, it is proposed that all patents issued under the present statute (ie old patents) would be subject to the provisions of the new law except in the following respects:

1. the term for such patents would extend under the new law without being conditional upon the establishment of local manufacturing in Canada, to last for 17 years from grant;
2. the priority date for old patents for purposes of defining the state of the art would be deemed to be two years prior to the date of the actual filing of the application for such patent in Canada, except for purposes of revocation proceedings based on lack of inventive step. In such cases, the patent would be tested against the state of the art on the actual date of invention;

3. the provisions of s. 63 of the present patent act giving certain persons special status to challenge issued patents for up to one year after grant would continue to apply;
4. the disclosures accompanying old patents would remain subject to the standards of the old law for two years from the date that the new act comes into force, giving patentees ample opportunity to amend such disclosures to conform with the new law if necessary;
5. no interim rights pursuant to s 23 of the proposed draft law would be conferred upon old patents;
6. the provisions limiting grounds for revocation for lack of novelty under s 75 of the proposed law would not apply to old patents; and
7. compulsory licences for nonworking would not be available until three years from actual grant of the old patent.

Other than the above qualifications, all provisions of the new law would apply to and govern old patents, as if they had been issued under the new law.

The effect of the above proposal would be to subject all old patents to the standards of patentability and compulsory licensing regime of the new law. However, the new law is largely declaratory of the old law with respect to patentability. The express exclusion of computer programs and programmed computers, while at variance with some patent office decisions, establishes a definite policy in an area where the previous law was equivocal.

The compulsory-licence provisions in the new law largely reflect the policies of the old law. These provisions are expressly adopted in the public interest and should apply for that reason notwithstanding changes in the detail of their application.

With respect to applications pending before the patent office at the time that the new law comes into effect (ie old applications), the provisions of the new law would apply, except in the following respects:

1. the priority date for such old applications for purposes of defining the state of the art would be deemed to be two years prior to the date of the actual filing of the application for such a patent in Canada, except for purposes of conflict proceedings or revocation proceedings based on lack of inventive step. In such cases, the application or patent resulting thereon would be evaluated on the basis of the actual date of invention;

2. all old applications would be published under the new law after the prescribed period following the priority date of the application as defined under the new law;
3. the term of patents issuing on old applications would extend under the new law as if the actual date of publication under the proposed law were the priority date for purposes of establishing term;
4. the provisions of s 63 of the patent act giving certain persons special status to challenge issued patents for up to one year after grant would continue to apply with respect to patents granted on old applications that issue within one year from publication; and
5. compulsory licences for nonworking would not be available until three years from the coming into force of the new law or seven years from priority date, whichever is later.

Apart from the above specific provisions, patents arising from old applications would be subject to all the provisions and procedures established under the new law.

With respect to applications not yet filed, the only manner in which the new act would not apply would be to grant applications filed within two years from the date of transition, a grace period commencing two years prior to the actual filing of the application in Canada. This proviso would eliminate cases of hardship where persons had published their inventions prior to filing applications in Canada, relying on the grace period available under the present act.

One further transitional provision is also proposed. The effect of chapter 8 of the proposed law would be to make certain types of agreements respecting assignment of future inventions invalid. Such agreements may already be in existence. Accordingly, in order to prevent the operation of the new act from doing excessive violence to these older arrangements, it is proposed that the following provision apply:

any agreement which purports to grant ownership or title in a future invention existing at the time the new law comes into effect and which would be inoperative by reason of the provisions of the new law, will be deemed to grant a nonexclusive licence.

While the foregoing proposals are not intended to represent an exhaustive summary of all transitional provisions which could be incorporated at the time of adoption of the new law, they are intended to indicate the direction of policy which it is felt should apply. That policy takes into consideration the special nature of the patent system and its effects, not only on persons claiming rights under existing patents, but also on the public in general.

Format

This part of the working paper is a general discussion of the proposed law, which is appended separately. This discussion deals mainly with the structural details of the provisions themselves. However, at the beginning of the analysis of some of the major chapters of the proposed law, a more general discussion of objects and alternatives has been included.

In developing a format for the proposed law, an effort has been made to reduce the law to easily readable and understandable terms, organized so that the principles applied can be perceived and appreciated by ordinary people. As much as possible, the proposed law is intended to set out the requirements and conditions for obtaining and enforcing patent rights, without the necessity of reference to jurisprudence.

The new proposed law is presented in draft statutory form. This lay draft is divided into chapters dealing with the prerequisites of patenting, the procedures of acquiring or enforcing patents and other collectively related matters. In each of these chapters, the new proposals are set out in the right hand column while the left column contains references to the corresponding or relevant sections of the present Patent Act, the European Patent Treaty, the Common Market Convention, the present US Code Title 35, the Ilsley Report, the Banks Report, the US President's Report, or other relevant references.

In summary form, the topics assigned to each of the chapters are as follows:

- | | |
|---------------------------|---|
| Introductory Provisions - | The objects of the law along with the usual definitions; the powers of the Governor in Council to pass regulations, and provisions to encourage a review after ten years. |
| Chapter 1 - | "Patentability" - the subject matter or types of inventions which qualify for the grant of a patent. |
| Chapter 2 - | "Rights Accruing Under Patents" - the various rights accorded to patentees at various stages of patent ownership. |
| Chapter 3 - | "Application Procedures for Acquiring a Patent" - who is entitled to apply for a patent and the steps to be taken by an applicant to obtain a patent. |
| Chapter 4 - | "Proceedings Before the Patent Office" - the stages and procedures by which the Patent Office examines and grants patents, with provision for participation by the public. |
| Chapter 5 - | "Qualifications on Patent Rights" - exceptions and limitations to patent rights which arise through events or circumstances not related to the nature of inventions which are patented. |

- Chapter 6 - "Enforcement of Patent Rights" - the prerequisites to infringement proceedings and the nature of remedies available to patentees.
- Chapter 7 - "Revocation of Patents" - the circumstances under which patent rights can be terminated, and the remedial steps by which revocation can be avoided.
- Chapter 8 - "Transfer of Rights" - assignment, licences, registration and restraints on the transfer of patent rights.
- Chapter 9 - "Administration" - the Patent Office, the Commissioner of Patents, their powers and duties, and provision for recognition and supervision of activities by patent and invention marketing agents.
- Chapter 10 - "Offences and Penalties" - prohibited activities.

Summary of Proposed Patent Law

Before enlarging upon the specific provisions of the various chapters listed above, it may be useful to summarize the main provisions of the proposed patent law.

1. Patents will be issued to the inventor who establishes the earliest priority date by filing an application rather than maintaining the present system which is based on the first to invent.
2. There will be no general grace period allowing publication before filing of applications except that applicants will have a six-month period to file their applications where unauthorized publication had occurred in breach of confidence, where disclosure had occurred at designated conferences, and where necessary public experiments had taken place.
3. To be patentable, an application will have to disclose an invention which is susceptible of commercial or industrial application and which is not part of the state of the art at the date of filing or priority date. The state of the art will comprise everything made available to the public by means of written or oral description, by use or in other ways. There will be no territorial limitation on use; the public would be the public anywhere. Likewise, there will be no limitation on the mode of disclosure.
4. An express list of nonpatentable subject matter, capable of further extension by regulations, will be established.

5. Food and drugs made by chemical processes will be patentable independently of the process of manufacture. Products of this type, regardless of the method of manufacture, will continue to be immediately subject to compulsory licensing in the public interest.
6. An invention, to be patentable, will expressly be required to involve an inventive step. The inventive step will be defined by the criterion that, having regard to the state of the art, the idea would not have been obvious on the applicant's priority date to a person skilled in the art.
7. No patent will be available for any invention in secret commercial use for longer than a prescribed period prior to filing.
8. In determining priority between rival copending applications, the whole contents of an application having the earlier priority date will be citable against the other, contingent on the eventual publication of the earlier application.
9. Pending applications will be published after a prescribed period from the date of filing or, if priority has been claimed, from the priority date.
10. Patentees will be entitled by way of interim protection to claim compensation on account of use of an invention after publication and prior to grant of a patent, if, in fact, a patent is actually granted.
11. An applicant will be permitted to withdraw an application after filing and before the date of publication in order to keep the invention confidential.
12. Within a prescribed period from the publication of the application, if regulations so prescribe, the applicant may be required to request that examination proceed or that examination be deferred.
13. Examination could also be precipitated on the initiative of third parties where the Commissioner is satisfied as to their bona fide interest in a determination of the patentability of a pending application.
14. After publication any party will be able to submit to the Patent Office prior art and arguments relating to the allowance of an application. These submissions would be in written form and would be refutable by the applicant by written argument. Anonymous submission would be permitted if desired.

15. The Patent Office will, after due examination, allow or reject the application. Reliance may be based on search or examination results in a foreign country if regulations so provide.
16. The term of the patent will be 14 years from the priority date, subject to being worked by the patentee in Canada during the last five years. If not worked in Canada by the end of the ninth year, the patent would lapse.
17. An applicant will have broad rights to amend voluntarily and in reply to objections from the Patent Office at any time up to a prescribed period after filing. After grant, amendments to clarify or narrow the patent would be freely permitted except when steps have been taken to challenge the validity of the patent.
18. The rights granted will be the exclusive right to make, use, sell and import, subject to express exceptions and compulsory licensing in the public interest. Old products prepared abroad by a new process patented in Canada will be subject to importation restraints only to protect Canadian manufacturers who are actually working the invention in Canada.
19. The exclusive rights granted will not prevent the importation into Canada of patented products acquired abroad from the patentee or related persons. Related persons will include subsidiaries or parents and assignees or licensees under foreign patents relating to the same inventions.
20. Contributory infringement as well as conspiracy to infringe will be actionable.
21. Infringement of the exclusive rights under patents will not occur where another person had innocently used or was in the process of preparing to use the invention prior to publication in Canada of the patent application or a description of the invention.
22. The remedies available to patentees in cases of infringement will be restricted to damages and an injunction. An accounting of profits will not be available. Damages will be assessed from the date of actual notice only, but marking will be construed as notice to manufacturers and importers. Legal action will have to be commenced within three years of an act of infringement.

23. Compulsory licences to enable the working in Canada of complementary inventions, and to protect industry and consumers from injury or unfair prejudice will be available from the date of grant.
24. Compulsory licences to manufacture an invention not being worked in Canada will be available as of the seventh year from the priority date of the patent.
25. Maintenance fees, together with prescribed information filings, will be required at the 3rd, 6th, 9th and 12th years from the priority date.
26. Instruments and particulars relating to the transfer of any interest in a patent will have to be registered.
27. The standard disclosure of inventions in patent specifications will be governed by principles similar to the standards defined by the courts under the present act, but subject to regulations of form and detail.
28. A patent will be revocable if found after grant to be unpatentable, or if used by the patentee as a basis for an infringement action within two years of commission of an offence under the Combines Investigation Act involving use or reliance on the patent. After the ninth year revocation will be limited to grounds other than lack of novelty or inventive step.
29. Before the Patent Office, the burden of establishing patentability will be on the applicant. An issued patent will carry an improved presumption of validity.
30. Misrepresentations to the Patent Office will be a defence in infringement actions and grounds for impeachment, but only in cases where examination of the applications would likely have been prejudiced; this would include wilfully failing to inform the Patent Office of any information required by law or regulation that would affect the validity of the patent.
31. A licensee will be permitted, upon payment of future royalties into court, to request a judicial declaration on the validity of a patent. Upon revocation of a patent all further obligations of any licensee will thereafter cease.
32. The rights of the crown under present s 19 will be retained in the form similar to these recommended by the Ilsley Commission, with provisions extending to use by the provinces.

33. National security provisions, as recommended by the Ilsley Commission, will be adopted.
34. Provisions will be adopted codifying master-servant relationships, limiting terms of employment agreements and giving employed inventors an opportunity to acquire control of their own inventions if unused by their employers.
35. Clauses in licence agreements requiring automatic grantback of all future improvement inventions will be prohibited.
36. Practice as a patent agent before the Canadian Patent Office, before foreign patent offices as well and related invention-marketing activities will be subject to regulation.
37. The minister responsible for the Patent Act will be required to report to parliament on its operation after ten years. Unless extended or revised by parliament, no patents will issue under the new law after that time.

INTRODUCTORY PROVISIONS

This part of the draft law contains certain introductory provisions and provisions which apply to the act as a whole.

1 Interpretation -- s 2

The definitions set out in the present act have been adopted as a basis for the definitions under the proposed law. Some changes have, however, been incorporated.

"Applicant" has been changed to cross reference to the definition of persons entitled to apply for patent under s 30(1).

"Authority", while not defined in the proposed law as prepared for the working paper, would have a chapter dedicated to its definition and structure in a final version of the act.

"Convention country" is defined in order to complement the stipulation under s 33(2) whereby applicants may claim the benefit of an earlier priority date. The normal meaning of this expression has been varied by the inclusion of Canada as a convention country. As discussed with respect to s 33(2), applicants will be entitled to rely on earlier Canadian applications for priority purposes.

The definition "computer program" has been included in order to clarify the exception to patentability created under s 17(1)c. This definition parallels the exceptions set out in s 17(1)a and d.

"Inventor" has been defined, consistent with the policies detailed with respect to s 30(1)c, to include as joint inventors persons contributing to the formulation of an invention. This definition is intended to prevent narrow or stringent interpretations of the meaning of "inventor" and, consistent with the policy developed with respect to s 32, to reduce the grounds which can be used to question a patent's validity.

"Patent" has been defined to be consistent with the provision of s 4(5). That section will permit future termination of the present procedure by which actual "letters patent" are issued by the Patent Office, with evidence of title instead being established by the records of the Patent Office.

"Patentee" has been redefined under the act to restrict this word to meaning only the "owner" of the patent. Other persons entitled to benefits or having an interest under the patent will be expressly referred to as such.

The definition of "process" has been taken from the US patent code, s 100(b) and reflects part of the definition of "invention" under the present act. "Process" no longer forms part of the criteria for patentability, but first appears under chapter 2, "Rights Accruing Under Patents", particularly in ss 20 and 22.

Similarly, "product" has been defined as broadly as the balance of the definition of "invention" found in the present act.

"Work on a commercial scale" is an expression which will attract considerable attention under the proposed law. The definition existing under present s 2 has been maintained, except that the definition under the proposed law is subject to standards established by regulation.

It may be possible, for instance, for regulations to stipulate that, for each product covered by a patent claim, a certain percentage of the total value of the article must be added through industrial activity taking place within Canada. This added value ratio might be based on a weighted average drawn from similar classes of products which are already being manufactured in Canada.

2 Policy of the Law -- s 3

This section sets out the objects by which the provisions of the proposed law should be tested. The reference to encouraging the working of inventions in Canada under present s 67(3) is, in the present law, expressed as being applicable only for the purposes of the compulsory licensing provisions. Under s 3(1)c, this is made, subject to qualifications, an object of the entire law.

The objects under s 3 establish the encouragement of innovation appropriate to Canadian conditions as the ultimate objective of the Canadian patent law. Subsections 3(1)b and c emphasize that the innovation process is divided into two stages. Under the proposed law, two levels of benefit will be conferred upon patentees, in accordance with the degree of contribution that the patentee makes toward advancing the objects of the proposed law. Different lengths of patent protection will be made available according to whether the patentee merely discloses an invention or goes further and establishes commercial production in Canada.

Express reference is made in subsection 3(1)d to the fact that the patent right is not a simple exclusive monopoly, but rather a qualified right. This provision is intended to emphasize that the statute is to be interpreted from the starting point that the rights granted patentees are based on a compromise. This will foreclose arguments that interpretation of the law should be based, as a starting point, on the theory that creators have an inherent right to enjoy the exclusive exploitation of their ideas.

The object of encouraging the working of inventions in Canada is, under ss 3(1)c and d subject to the proviso that only commercially viable industry is to be encouraged. The intention is to encourage the exploitation of new technology only in those cases which constitute an efficient use of Canadian resources. This express proviso is reflected subsequently in the section dealing with the exhaustion of patent rights (s 25).

Subsection 3(1)3 introduces a new rôle for the Patent Office in the field of dissemination of information, not referred to under previous law. Further effect is given to this object by the provisions of s 90(2).

Section 3(2) implements one of the main policy objectives described in part 3 under the heading "Information Policy" (supra p). All of the information-gathering provisions created under the proposed law are intended to support the examination which will result in the minister's report under s 3(2). The ten-year deadline under this section is complemented by the further provision of s 7 which limits the extent to which the act is to apply after ten years.

3 Regulation Power -- s 4

This section establishes the general guidelines for the regulation-making power of the Governor in Council. The policy behind this provision has been detailed in part 2, under the title "Regulation Powers" (supra p 134).

Section 4(1)c is a new provision. Since the Patent Authority will be an administrative tribunal, its policies, unlike those of the courts, can be subject to governmental direction. By incorporating such directions into the regulation-making process, parliament will have an opportunity to review and debate the manner in which the Patent Authority carries out its responsibilities.

The provisions established under s 4(1)d for procedures to be followed before the Patent Authority are generally taken from the provisions of ss 12 and 41 of the present act.

Subsection 4(1)g (vi) contains reference to the deferral of fees, a feature not found in the present law. This provision has been incorporated in order to make it possible to assist certain classes of patent applicants to obtain patent rights. Under the US Senate bill S-2504 express provisions were incorporated in order to support inventors and small business concerns. One section (s 28) authorized the US Commissioner to establish a program to assist private inventors and small businesses in the preparing, filing and prosecution of applications. Other sections (ss 41(3)b (ii), (3)B and (6)) authorized a ceiling of \$100 on patent fees for inventors and small business concerns and also provide for deferral of maintenance fees (\$500 and \$1,000 due respectively at the 7th and 10th years). Similar provisions could be introduced into the proposed law by regulation under the authority of s 4(1)g (vi).

As an example of possible provisions under the Canadian law, any applicant who could show:

1. that he is equitably entitled to the Canadian rights in a pending application;

2. that his gross revenue from all sources of income does not exceed a prescribed amount (for example, \$50,000), and
3. that he is prepared to disclose all expenditures made and contemplated with respect to obtaining patent rights for the invention for which the application is filed,

might be entitled to a deferral of the fees under the act. Where such a deferral has taken place, no legal action could commence with respect to the application while the fees are in arrears.

The effect of a proposal of this type would be to assist applicants who are not likely able to pay substantial sums to obtain patents. Under these provisions, they will be assisted in at least proceeding through the application stage. Where a patent later turns out to be of commercial value, it can be given full status by payment of all fees otherwise deferred.

The conditions suggested above have been included to ensure that applications are not filed by persons acting as trustees for other applicants who would not qualify, to limit the section to those applicants who require assistance and to provide a means of monitoring the operation of the program.

Subsection 4(1)g (vii) gives authorization for extension of time limits otherwise fixed by the act. Presently, such extensions can be obtained in the case of postal disruption through an application to the Federal Court under the Postal Services Interruption Relief Act, RSC 1970 c P-15. As an administrative matter, this procedure would be more conveniently carried out before the Patent Office. The subsection goes further, allowing regulations to generally extend time limits in cases of hardship. Through s 4(3) power can be assigned to the Commissioner to exercise a discretionary authority to evaluate hardship cases and grant relief. A similar section can be found in the patent law of the Federal Republic of Germany (art 43).

Section 4(3) further permits regulations to delegate to the Commissioner part of the regulation-making power. The scope of this delegation when it is established in an original order in council will be subject to review by parliament. The ability for the Governor in Council to delegate some of its regulation-making power to the Commissioner will be essential in order to assure that variable situations can be accommodated with flexibility.

In order to ensure that parliament has an adequate opportunity to supervise the exercise of the regulation-making powers established under the proposed law, s 4(4) requires that all regulations be published in advance of their approval. A provision similar to this effect is included in the Broadcasting Act, RSC 1970 c P-11, s 16(2).

Section 4(5) provides authority for the eventual discontinuance of the procedure of granting actual letters patent. While this is a traditional method for affirming the existence of such rights, letters patent presently, where lost, can be replaced on payment of the appropriate fee. With proper provisions, it may be sufficient to rely simply on the records of the Patent Office. Section 4(5) looks forward to that possibility, leaving the ultimate decision to be made by order in council.

Section 4(6) follows the policy established under the Official Languages Act RSC 1970 c 0-2. The section is also authority for requiring applicants to supply translations of foreign-language documents for the convenience of the Patent Office, if so required by regulation.

4 Patent Cooperation Treaty s -- 5

The Patent Cooperation Treaty originated from a proposal by the United States made within the Paris Union in 1966. The original concept of PCT was to reduce the duplication of effort that exists at the present time in connection with filing patent applications for the same invention in more than one country. The treaty in its final form, as approved at Washington in 1970, is a complex document. Its major features may, however, be summarized as follows:

1. standardized format for applications,
2. centralized searching of applications,
3. centralized publication of applications,
4. delayed local filing of applications,
5. and under chapter 2, centralized preliminary examination of applications.

It is sometimes suggested that PCT gives applicants the advantage of centralized filing. However, under the Paris Convention an applicant always had the privilege of filing one initial application and delaying applications in foreign member countries for up to one year. Under PCT an applicant will be able to delay such foreign applications until 20 months from his priority date. Details on the time schedule and deadlines for the various steps under PCT are set out in table 10.

The treaty itself will only come into effect after eight countries have adhered to it, four of which have "major patent activity". When the European Patent Treaty comes into effect, there will be sufficient participants under that treaty to implement PCT. On November 26, 1975 the United States deposited its instrument of ratification to PCT with WIPO and has proceeded with implementing legislation which would incorporate appropriate changes into the US patent code to accommodate PCT.

Table 10 - Time Limits for Normal PCT Processing

International Application Filed	Designation Fees Due	Receiving Office must send copies of Int'l Appl'n to Int Bureau and Int Searching Authority	International Publication	Filing of national appl'ns (and fees) in the patent offices of the designated states
Priority Date		Search Report By I S A		
0 Months	12	13	16	18
	12	13	16	20

Time Limits

- The international application is filed at the end of the 12th month. It is transmitted to the International Searching Authority and the International Bureau at the end of the 13th month. The international search is carried out during the next three months (the 14th, 15 and 16th), but in time for the international search report to be sent to the applicant in the course of the 16th month. The applicant has two months (the 17th and the 18th) to amend the claims, and the following two months (the 19th and the 20th) to prepare the required translations. (It must be recalled that the applicant will have to pay the national fees and furnish the translations at the latest by the end of the 20th month.)

The proposed law has been drafted in such a manner that most of the provisions which would have to be made to accommodate PCT are governed by regulations. Some of these items are as follows:

1. form of application documents (PCT, art 27) - s 4(1)g,
2. standard of disclosure (PCT, art 5, 6 and 7) - s 34,
3. right to amend (PCT, art 28) - s 38,
4. date of publication (PCT, art 30) - s 40,
5. commencement of local examination (PCT, art 23) - s 42.

However, in order to confirm that regulations may give special treatment to applications which follow the PCT route, s 5 has been incorporated into the proposed law. Section 5 corresponds in some respects to the provisions of s 47 of the Copyright Act. However, unlike the provisions in the Copyright Act, s 5 in the proposed law is limited to the procedural aspects of the patent application and examination process.

While provision has been made in the proposed law for Canada's adherence to PCT, this decision need not necessarily be made. The primary purpose behind the treaty is to facilitate the filing and initial processing of patent applications. Its implementation by Canada would place certain constraints on our national law, particularly requiring that the publication of applications be delayed until at least 18 months from priority date. Further, adoption of PCT by Canada, while facilitating the filing of foreign applications by Canadians, might also substantially increase the number of applications filed by foreigners in Canada.

In an effort to obtain advice from interested persons on whether Canada should ratify the Patent Cooperation Treaty, the Commissioner of Patents in the July 31st, 1974 edition of the Patent Office Record invited submissions on this and related questions. Briefs and submissions were received and a report was prepared by officials on the nature of the comments made. A copy of this report is included as Appendix F to this working paper.

5 Limited Duration for Granting a Patent -- s 7

This section complements the provisions of s 3(2) requiring the minister to prepare a report to parliament after the proposed law has been in effect for ten years. This section does not suspend the operation of the law but merely the issuance of patents based on applications which are allowable. In a manner similar to the provisions of s 6 of the Bank Act RS 1970 c B-1 this will ensure that parliament will reexamine at that time the operation of the patent law and the progress that the minister has made in his review of the system.

CHAPTER 1 -- PATENTABILITY

1 Objects and Alternatives

In considering the criteria for subject matter which should qualify for a grant of patent, two different types of issues arise. The first is whether patents should be restricted according to the type or category of invention involved, ie subject matter. The second is the degree of novelty which is to be required. Further factors which should be considered in establishing the conditions for patentability include the costs and benefits of adopting provisions which depart from the traditions of our present law and of adopting provisions which are modelled on or are similar to foreign law.

2 Patentable Subject Matter -- Alternatives

In defining patentable subject matter, it is possible to conceive of a patent system which limits patent protection to certain specified classes of activities. This is in contrast to the policy of our present law of making patents available on an indiscriminate basis for technical advances across almost the entire spectrum of industrial and commercial activities.

If we were able to discern and define those classes of commercial or industrial activity which need the special incentive of patent protection, then with an ideal law we could limit patent rights to those classes. However, since we do not now have enough information about the impact of patent rights on the business sector, it is not possible to consider such a system. Therefore, the proposed law generally continues the past policy of allowing patents for almost all kinds of inventions, no matter in which field of activity they arise.

Historically, the Canadian law has been modelled in statutory form on United States legislation, defining a patentable invention to include "any new and useful art...". At the same time British jurisprudence based on limitations set out in the Statute of Monopolies - "any manner of new manufacture..." has been applied by the Patent Office and in the courts. The present law expressly excludes certain narrow, defined categories of subject matter from forming a basis for granting patents. Present s 28(3) provides:

"28(3) No patent shall issue for an invention that has an illicit object in view, or for any mere scientific principle or abstract theorem."

However, following UK jurisprudence, further exclusions extending to such fields as agricultural processes, artistic creations and medical techniques have been applied in practice (supra, p 119).

While it may not be possible at the present time to determine or identify those classes of industrial or commercial activities which would particularly benefit from the granting of patent

rights, it may be possible in the future to enlarge the present practices and to determine further classes of activities which should be excluded from patentability. Such exclusions would arise with respect to activities which would not benefit from imposition of patent rights. On this basis the proposed law includes provisions for removing specified classes of industrial activities from the operation of the law.

The Canadian and British practice with respect to general patentability and traditionally excluded classes of patentable subject matter has been largely codified under the European Patent Treaty in the sections governing patentability. Under the provisions of EPT, patentable subject matter is defined in an exclusionary manner. Any invention which is susceptible of industrial application qualifies for grant of a patent, subject to an express list of exceptions. This list of exceptions deals with fields of invention where it is felt that the patent system cannot usefully operate or would not likely operate to a net positive benefit.

Since the EPT, when implemented, will govern access to an economic market the size of which is as large as that of the United States and since the structure of the EPT has been carefully developed over years of extended discussion and analysis to reflect a synthesis of the best features of the laws of the participating countries in Europe, the provisions of the EPT respecting patentability have been adopted as a model for the proposed law.* The use of the scheme of the EPT as a model for patentability criteria will also open the possibilities for introducing a fundamental change in patent examination procedures (cf infra p 235).

2.1 Patentable Inventions -- s 10

Section 10 of the proposed law, following art 52(1) of EPT, provides that a patent shall be granted for any invention which is "susceptible of industrial application". The expression "susceptible of industrial application" has the advantage that it will accommodate the widest possible range for inventions. Subsequently, s 17 will narrow the scope of patentability by listing express exceptions.

Section 10 also summarizes the other essential prerequisites to patentability, namely novelty and nonobviousness, criteria which are defined and discussed subsequently.

2.2 Industrial Application -- s 11

The actual definition for "industrial application" adopted in proposed s 11 follows that of art 57 of the EPT, with the additional insertion of the word "commercial" to ensure maximum breadth of definition. This addition reflects the wording used in art 1(3) of the Paris Convention in its definition of industrial property.

* For a detailed discussion of patentability under EPT see "The Patentable Invention in the European Patent Convention" by Gert Kolle, IIC Vol 5 p 140 (1974).

Section 11 also differs from art 57 of the EPT in respect of the treatment of the word "invention".

Under the proposed law, there is no definition of 'invention'. Instead Chapter 1 deals in considerable detail with the definition of what is to be patentable. The real issue is, of course, the conditions for patentability. The definition of 'invention' under the present act is really only a vehicle for defining patentability. Under the proposed law the criteria for patentability are expressly stated, without attempting to roll them up into a single word such as 'invention'.

The word 'invention' has in the past been used with a multiplicity of meanings such as:

1. the act of inventing;
2. the material thing created or arising from the act of inventing;
3. the abstract advance inherent in the thing created.

This multiconceptual usage is not conducive to clear thinking nor does it assist a logical analysis of the structure that the law should follow.

In using the word 'invention' throughout the proposed law, an effort has been made to avoid the suggestion that an invention means some physical form or article. Therefore, the long-recognized multidimensional meaning which can be associated with this word is avoided. Rather, 'invention' under the proposed law is the abstract advance or concept which, when applied through a physical form or through a physical series of steps in a process, gives rise to an industrial application.

This meaning of the word 'invention' has resulted in the change in s 11 by which "applied" is substituted in lieu of the word 'made' which otherwise appears in the corresponding section of EPT art 57. The consistent application of this policy regarding the meaning of the word 'invention' affects the wording of other portions of the proposed law as well.

2.3 Excluded Categories -- s 17

Section 17 of the proposed law constitutes the exclusionary portion of the definition of patentable subject matter. This section follows the scheme of EPT art 52 and 53 and generally reflects the present law in Canada.

In proposed s 17(1)a the EPT expression 'scientific theories' has been expanded to 'scientific principles or theories' to ensure that this exclusion is as broad as present s 28(3). The addition of the reference to "mathematical algorithm" in s 17(1)a complements the provisions of s 17(1)c and d in ensuring that all avenues for obtaining patent rights over computer programming techniques will be closed.

The Economic Council recommended expressly in its report that patents not be granted with respect to computer programs (p 101). A similar policy has been followed under EPT, art 52(2)c and the United Kingdom is to amend its patent law to incorporate the equivalent provision insofar as the express exclusion of computer programs from the patent law is concerned (UK Consultative Document, p 12, para 39).*

It is appropriate on economic grounds to exclude from the patent system types of patent rights that would interfere with the freedom of computer users to use computer systems to their maximum capabilities. The granting of exclusive private monopolies for computer programs would restrain others from using newly discovered methods of processing information. This would be unduly disruptive in a society where efficient processing of information is becoming increasingly important. The patent right, unlike copyright, would apply even against those who independently conceive of a patented program by themselves. Computer programs, 'software', are now being created in industry as the need arises, even in the absence of patent rights. The software industry, further, is not burdened with an expensive, uncertain postinvention innovation phase, the encouragement of which argues for continuation of patent rights in other kinds of industrial endeavours. While the software industry may have an interest in establishing legal provisions which will allow recovery of programming costs from a broad base of users, perhaps even through reliance on temporary rights to limit use of programs, the patent system is not the best vehicle for advancing such interests. For these reasons, computer programs are excluded from patentability under the proposed law.

A problem arises, however, in framing legal provisions which will properly exclude from the patent law the computer programming art. Confusion exists with respect to the present law regarding computer programs in most countries around the world. Much of the confusion arises out of legal argument raised by patent attorneys that, while computer programs (mathematical algorithms) may not be the subject of patenting, a computer which has been set up to carry out a new program qualifies as a useful new machine and should support the grant of a patent.

If patents were granted covering computers which have notionally been converted to a specialized machine adapted to carry out a particular series of information processing steps, then the owner of such patent rights would have as valuable a monopoly as if he controlled the right to the idea of the program itself. Not only would such a monopoly be valuable, but it would also be disruptive. Central processing computers, operating on a time-sharing basis, could cycle in and out of an infringing format on the instructions of a user at a remote terminal without any knowledge on the part of the computer operator. The complexity of the enforcement process under such circumstances also argues strongly for the removal of computer programming technology in all aspects from the patent system.

*Accompanying the White Paper published in April, 1975 (supra p 6)

Accordingly, the prohibition against patents in respect of programs for computers has been enlarged under the proposed law by the addition of the reference to "algorithms" in s 17(1)a, by reference to "use of computer programs" in s 17(1)c, and by the express exclusion of "programmed computers" under s 17(1)d.

"Computer program" is additionally defined under s 2. Section 17 is so worded that incorporation of a computer program into a process or product will not be a bar to patentability, if the product or process is patentable by reason of features apart from the computer program element. This policy is stated affirmatively in s 17(2) which follows a similar provision under EPT art 52(3).

Section 17(1)e refers to "presentations of information". This rather cryptic expression, following EPT art 52(2)d, deserves further amplification. The intention is to exclude from patentability any information display or, in effect, "presented information" where utility resides in the information content and its organization. Thus the provision bars any new arrangement of writing, signs or shapes whose utility resides in the information communicated, but does not apply to a mechanism such as a television set since, in that case, utility does not arise from the information content conveyed, but from the ability of the receiver to display images.

Section 17(1)f excludes plant and animal varieties from the operation of the law. Patents have not, in the past, been granted in Canada for these types of items and the proposed section, following EPT art 53(b) continues this exclusion on the basis that no case has been made for extending the law further than exists presently. The US President's Commission recommended removal of the present US provisions respecting plant varieties from the patent system (p 12).

Section 17(1)g follows EPT art 52(4) in excluding medical treatment procedures from the law. The effect of this provision is equivalent to the result obtained under UK jurisprudence applying the 'manner of manufacture' standard and the further test developed thereon of requiring an invention to be associated with a 'vendible product'. Other reasons, based on the technical wording of s 41 of the present act have led the courts in Canada to similarly exclude methods of medical treatment from the patent system.*

This exclusion is maintained under the proposed law in recognition of the fact that it would be intolerable for the law to support interference with the act of medical treatment. If methods must be found to support or reward innovation in the field of medical treatment, they would be better developed through a mechanism

* cf Tennessee Eastman Co v Commissioner of Patents, (1974) SCR 111

which does not entail resort to prohibitory injunctions issuing from a court which would interfere with the course of medical treatment.

Section 17(3) follows a recommendation of the Banks Committee that the list of included or excluded patentable subject matter be alterable from time to time, to meet new development, to remove uncertainties and to keep in line with international trends (Banks p 65 para 229). This proposal has been approved by the UK government in its White Paper and the new UK patent law will include a nonexhaustive list of exclusions from patentability, subject to amendment by order in council (UK White Paper, p 4, para 12).

Section 17(4) of the proposed law reflects the policy of s 35 of the Interpretation Act, that accrued rights are not to be repealed except by act of parliament (cf supra p 161).

As indicated earlier, the scope of patentable subject matter is the first major issue under the general heading of patentability. The second major issue is the type of novelty that should be demanded as a condition to grant of a patent.

3 Novelty -- Alternatives

Although considered a fundamental characteristic of any patent system, novelty is in fact a complex and multidimensional concept. The various aspects of the standard of novelty which could be established as a precondition to the granting of a patent can be divided into the following categories:

- (1) reference date -- whether novelty is judged as of date of invention, date of application or some other date;
- (2) degree of novelty
 - territorial scope -- whether inventions must be new-to-the-world or only new locally;
 - nature of prior availability -- whether the invention must have been never-before-known or never-before-disclosed (specially or generally) or never-before-used;
- (3) source of prior disclosures -- the extent to which a prior disclosure originating with an applicant should be discounted.

The present Canadian law adopts a complex hybrid standard of novelty, which varies according to the form of disclosure and the relationship to two separate reference dates.

Under the present law in Canada, local novelty applies with respect to public use or sale, but world novelty applies with respect to any description of an invention in a printed publication. The reference date in both cases is two years before the

filing of an application in Canada. This reference date operates for these two provisions irrespective of the source of any disclosure occurring during the two-year grace period (present act, ss 28(1)b, c).

Superimposed on these standards of novelty is the further requirement that an application must not have been known or used by any other person as of the date on which the patent applicant made the invention himself. This provision is exceedingly broad, being not only unlimited in respect to territory, but also unqualified as to the degree or form of availability of such prior knowledge or use (present act, s 28(1)a).

This latter standard of novelty, however, only survives and applies after grant of a patent where the prior knowledge or use of another person occurring before an applicant's date of invention was followed by disclosure or use of the invention in such a manner that it became available to the public prior to the applicant's filing date (present act, s 63).

3.1 Reference Date

The use of the date of invention as a reference for purposes of novelty is a unique characteristic of the patent systems of Canada, the United States and the Philippines. Much has been said about abandoning reliance on the first-to-invent element in Canada's patent system. The Ilsley Commission recommended that Canada move to a first-to-file system, introducing its discussion of this point with the title "A Fundamental Change Recommended", and including five pages of detailed argument (pp 19-24). The Economic Council, as well, suggested adoption of the first-to-file system (p 88). The proposed law implements those recommendations.

The change to a first-to-file system is not as fundamental as may at first seem. The change will not get rid of the problem of identifying and sorting out conflicting applications. Applications disclosing similar subject matter will still have to be detected, compared and evaluated. However, the fact-finding process by which applicants establish reference dates by proving the time when each inventor respectively first formulated, either in writing or verbally, a description which affords the means of making the invention, will be obviated. In effect, under the first-to-file system, a description will now be considered incomplete up until the date on which it is actually filed before a patent office as a part of a patent application.

One of the main arguments put forth in the United States in favour of the first-to-invent system is not applicable to Canada. The US law has a special provision by which an invention is only recognized as complete when it is introduced into the United States (US code s 104). This gives US residents an advantage over foreign inventors. The present Canadian law does not include any similar provisions, and this working paper does not recommend their adoption because they would entail unjustified unequal treatment of foreign applications.

3.2 Territorial Scope and Prior Availability

Adoption of a first-to-file system will change the basis on which conflicting applications for the same invention are evaluated, but the winning application will still have to be tested for novelty against use or disclosure by others. Presently, in Canada, the standard of novelty is local with respect to use or sale, but worldwide as to disclosure in a printed publication. This is the same standard as exists under the present US law. The present UK law maintains a standard of local novelty, both with respect to prior use and prior disclosure.

The distinction between local novelty with respect to use or sale of inventions and worldwide novelty for the disclosure of inventions is not uncommon for many national patent systems around the world. This system is, however, open to the objection that foreigners who have proven new technology by commercial use of an invention in their home country can come to Canada many years after the invention has been put into effect and obtain patent protection, as long as printed disclosures of the invention have never been distributed publicly.

The criteria of local novelty based on prior use would be appropriate to a patent system directed to supporting the introduction of new industry into the country no matter whether or not it is based on new or old technology. However, as indicated in part 1 of this working paper, (supra p 98) Canada is now past the stage of industrialization where such a policy would be in the national interest.

The present US law applies only local novelty with respect to prior use. However, the US President's Commission recommended enlargement of the scope of novelty under US law to include foreign knowledge, use and sale and further, to include any form of publication irrespective of whether the disclosure was "printed" (p 7).*

The UK White Paper, following the recommendations of the Banks Committee, indicates that the standard of novelty in the UK will be changed to that of absolute novelty (p 4, para 12). This change will bring the UK law into line with the standards of patentability adopted under the EPT. In making this transition, the UK law will be moving from one extreme standard, total local novelty, to the other, absolute novelty.

Absolute novelty as a term of art refers to the requirement that an invention be new in the sense that it has never before been made available to the public anywhere in the world at any time

* Senate Bill S-2504, however, maintains the local novelty criterion as to use, along with the provisions of section 104, referred to above (p 184).

prior to the applicant's filing date. It constitutes the most restrictive standard of novelty possible under a first-to-file system, limiting the grant of patent rights to only those applicants who make a disclosure which would not otherwise be available. It is the standard that Canadian inventors will be required to meet on applying for rights in Europe under EPT. It is the standard adopted under the proposed law.

The rationale for adoption of absolute novelty under the proposed law is two-fold. First, since the granting of private monopoly rights represents an imposition on Canadian industry, restraining adoption of new technology, that imposition should be allowed to arise only in the narrowest possible cases. Further, it is only under the standard of absolute novelty that foreigners are put on an equal footing with Canadians. This latter feature should be particularly significant in the Canadian situation due to the overwhelming participation of foreigners in the national patent system.

The standard of absolute novelty is sometimes criticized as introducing debilitating uncertainty into the validity of any patent granted under such a system. This objection, that patents are weakened as an economic instrument by the introduction of the possibility that they can be revoked after grant for want of novelty based on obscure or distant earlier disclosures, carries some weight. It can, however, be equally applied against the present patent system in Canada, and is inherent in any system which includes any standard of novelty as a criterion for validity. No search or examination procedure can ever guarantee that all incidents of prior use or disclosure will be identified, even where novelty is tested only on the basis of local use or disclosure. This problem of uncertainty respecting patent validity is subsequently considered further in dealing with the revocation of patents (s 75).

3.3 Proposed Standards of Novelty -- ss 13 & 14

These sections establish the standard of novelty which must be met for applications filed under the proposed law. The wording of EPT art 54 has generally been followed, subject to variations which will now be discussed.

In s 13, the expression "priority date" has been added to the wording of the EPT art 54(1) in order to introduce reference to this key date which will be assigned to every application (cf s 33). 'Invention' is used in the sense of the conceptual idea inherent in the advance that has been made over the state of the art. This advance will reside in the structural or procedural differences that distinguish the inventor's embodiments over the prior art.

In s 14(1) the reference to "the public" in EPT art 54(2) has been enlarged to "any member of the public" in order to emphasize the nature of the standard of novelty being applied. It is on this basis that the further words "anywhere in the world" have also

been added. The inclusion of the reference "in a nonconfidential manner" is intended to remove any doubt that a person may, prior to making an application for patent, disclose and discuss his ideas with other persons provided that this is done on a confidential basis.

The words "form part... of the art" in s 13, and "available to... the public" in s 14(1) are key elements in these provisions. They are likely to support extensive and continued examination as jurisprudence develops under the new law. Considerable jurisprudence already exists on the nature or degree of disclosure required to 'anticipate' an invention under the present law. The extent to which this jurisprudence will continue to apply once the new provisions are in effect should be worked out on a case-by-case basis. In any event, Canada could benefit from the jurisprudence which will develop in Europe respecting the identical expressions included under EPT.

Sections 13 and 14 do, in one respect, constitute a more relaxed standard of novelty than that established under the present law. Applications will no longer be defeated, as stipulated under present s 28(1)a, on the basis that the invention was previously known. Rather, the proposed law provides that applicants should only be prejudiced by prior public disclosures which make the invention available to the public. This is the same policy that is applied to patents after grant under the present law (present s 63).

Section 14(2) is the provision which makes the proposed law a first-to-file system. Earlier filed applications will under this section be treated as if they were available to the public as of their priority date, if they do in fact become published in due course pursuant to the provisions of the proposed law. Section 14(2) differs from EPT art 54(3) by inclusion of the reference to applications filed on the same date. This matter has not been dealt with under EPT. Presumably under EPT, where two applications have the same priority date, both will be entitled to grant of a patent. This is the position taken under present British law.

The possibility of simultaneous filings on the same day is one that should be considered. An example of a simultaneous filing occurred in the US case, Anderson v Natta v Ziegler 178 USPQ 458 (CCPA 1973). The problem cannot be met by relying on the exact time of filing since priority may be claimed on the basis of a filing before a foreign patent office which makes no record of the actual time of filing. While some jurisdictions deal with this situation by refusing to grant either application (ie Japanese Patent Law, s 39(2))* , the proposed law adopts the alternative of allowing both applications to issue, subject to special licensing provisions (s 85(3)).

* cf Industrial Property, March 1974, p 146.

While s 14(2) appears, on its face, to bar an application which has the same priority date as another application, s 14(5) allows grant of the application if the applicant makes the election as indicated. The reason for inclusion of the special procedure of s 14(5) is to give applicants an opportunity to argue the issue whether their application discloses the same invention as another application having the same priority date. Since this may be a litigious issue, it should be settled as part of the examination process. Where, however, an applicant is prepared to avoid dispute and accept the cross-licensing effects of s 85(3) then by making the election permitted under s 14(5) he will be entitled to obtain a patent. The concurrent application of the other party will be subject to the same procedure. The concurrent applicant will have the option, on being given a provisional rejection by the Patent Office under s 14(2) to either argue the existence of a distinction between his disclosure and alleged equivalent disclosures before the Office and on appeal, or accept that both applications may be granted.

In order to protect the public from the inconvenience of being forced to obtain licences to use one invention from two distinct parties, s 85(3) subsequently provides that a licence under one patent shall be deemed to have the effect of granting licence under the other patent with respect to the common matter within the claims of each of the patents.

Section 14(4) deals with the situation where an applicant's own earlier application is cited under s 14(2) against his own latter application. For the same reasons as discussed under s 14(5), the earlier application, if properly citable, constitutes a bar to grant of a patent unless the applicant waives his right to argue the issue and requests grant of a patent. The requirement of s 14(4)b that the applicant disclaim the terminal portion of the second application filed ensures that an applicant will not be able to extend his term of monopoly by filing multiple applications. This procedure of terminal disclaimer was introduced under the US law in 1952 to meet objections against double patenting (US code s 253).

As with respect to s 14(5), where two or more patents covering the same invention are allowed by reason of s 14(4) to issue, s 85(3) ensures that the power to grant consent to use of rights claimed in any such patent (ie to licensees) will not be split between separate owners. The ownership of such patents may be separate, but a licence under either will relieve the licensee from liability under the other.

Section 14(2) in combination with s 14(4) and the amendment provisions of s 38 will have the effect of allowing applicants the benefits of a narrow version of a "patent of addition". Patents of addition enable applicants to obtain patents on improvements to their basic invention, without being prejudiced by their own earlier invention or by the fact that they have filed for a patent on the earlier invention.

The UK patent of addition is very broad. It excludes from the prior art (UK s 26):

"any publication or use of... the main invention described in the complete specification... or... any improvement... of the main invention."

The Ilsley proposals included provisions for patents of addition similar to those existing under the present UK law (pp 57-9). Both the UK and Ilsley versions of patents of addition give patent applicants a special status to obtain further patent rights, unprejudiced by public use or disclosure of their earlier inventions, a privilege not available to other members of the public. Under UK law, this special status lasts until the original patent expires. Under the Ilsley proposals, an application for a patent of addition could only be filed prior to the grant of the original patent.

Under the proposed law all persons will be placed on the same footing with respect to improvement inventions. Such improvements, to be patentable, must entail an inventive step over what is publicly available at the date of filing. Any person who conceives of an improvement to an earlier invention will be entitled to obtain a patent for the improvement if the improvement is not something which would have been obvious to a person skilled in the art.

An applicant will, however, also be entitled to apply for separate patents for improvements or alternate versions of his invention at any time prior to publication of the initial application. Section 4(4) ensures that such subsequent applications will not be prejudiced by citation of earlier unpublished applications by the same applicant. This will spare applicants from having to face the dilemma of choosing between introducing the improvement as an amendment of the first application (which may turn out to be invalid if the amendment has been improperly added), and abandonment of the first application (with its earlier priority date) in order to protect and sustain the second application.

EPT art 54 contains a provision not included in the proposed law. Article 54(5) expressly stipulates that a new use for a known substance or composition is not excluded from patentability. This is the present law in Canada. Such a cautionary provision has not been included as a separate statutory provision in the proposed law on the understanding that it is inherent in the general provisions on patentability. Inclusion of an express reference as in EPT art 54(5) might have the undesirable effect of inferring that the provisions of ss 13 and 14 are to be read narrowly.

3.4 Source of Prior Disclosures -- Alternatives

A further element in the provisions of the proposed law governing the degree of novelty demanded as a prerequisite to patentability is the treatment of prior disclosures originating with an applicant as opposed to disclosures which originate with third parties.

Absolute novelty requires an idea to be new in the sense that it has never before been made available to the public anywhere in the world. Under absolute novelty, a person's own public disclosures will defeat his right to a patent, the principle being that if the idea is worth patenting, an inventor should recognize this fact and make his first disclosure of the idea before the Patent Office.

An alternative policy would be to allow applicants a grace period in which to publicly disclose their inventions in an effort to determine their commercial viability and attract attention and support for their development. The two-year grace period available under our present act (s 28(1)b) is usually justified in these terms.

The grace period established by the present law protects applicants from not only their own public disclosures but also from disclosures arising from any source anywhere in the world over the two-year period prior to filing. A grace period of this type is possible because applications are presently judged on the basis of invention date.

The Ilsley Commission suggested that this grace period does not operate in the Canadian interest (p 25). Any Canadian inventor who relies on the "false sense of security" generated by the two-year Canadian grace period will lose his right to obtain patent protection in the bulk of foreign countries around the world which do not grant such a grace period. Conversely, the grace period presently available under Canadian law allows foreigners to obtain protection in Canada for inventions which would be otherwise unpatentable in many other countries.

A further argument against any form of grace period was used by the Ilsley Commission (p 26). That argument was based on the theory that many applications filed in Canada are in fact 'defensive'. These types of applications were described earlier in this working paper in part 1 (supra p 41). The theory propounded in the Ilsley Report was that as long as a grace period exists, mere publication of a technical disclosure by a corporation will not ensure that some other party cannot thereafter proceed to file a patent on that technical development. To ensure itself the right to use the technology it has developed, an industrial user is forced to file a patent application.

With no grace period of any type allowed, the necessity of such defensive filings would not in fact exist. Instead, by publishing a disclosure of new technology, an industrial user would thereby defeat the ability of all others to obtain patent rights thereon.

3.4.1 Nonprejudicial Disclosures -- s 16

The proposed law contains provisions reserving the right of an inventor to obtain a patent notwithstanding prior disclosure of his invention. Section 16 does not, however, establish a grace period in the sense of allowing applicants to delay filing of

their applications for patents. Instead, s 16 acknowledges that, under the special circumstances set out, an applicant should not be prejudiced by a prior disclosure that is derived from his work.

Section 16(1)a recognizes that a disclosure may be made by someone in breach of confidence. Since an inventor must be permitted to discuss his invention in private, prior to filing an application, a disclosure in breach of such confidence would be beyond his control.

Section 16(1)b recognizes that Canada is obligated under the Paris Convention, art 11, to disregard any public disclosures that occur at international exhibitions. This section generalizes on this type of disclosure, enlarging it to any public meeting approved by regulation. This will allow extension of this provision to cover technical or scientific conferences and lectures.

Section 16(1)c is a provision not found under EPT. It recognizes that some inventions may have to be operated in public in order to prove their operability. This exception has in the past been recognized as in the case of testing a snow plow for use by street cars (cf Conway v Ottawa Electric Railway Co. (1904), 8 ExCR 432).

No corresponding provision to s 16(1)c exists under EPT. Therefore, Canadians who proceed to test their inventions publicly prior to filing may lose their rights under EPT. Omission of provisions protecting persons who carry out experiments in public in EPT may have been an oversight. Alternately, judicial interpretation may import such a privilege. However, the necessity for such a provision should be recognized under the proposed law.

Under s 16, where a disclosure occurs which falls within the special classes defined, the inventor will have six months to apply for a patent under the protection of this section. This is the period established under EPT art 55. By adopting a parallel period under the proposed law, the retention of foreign rights by Canadian applicants will be encouraged.

Sections 16(2) to (4) recognize that the application of s 16 will involve fact-finding procedures. These are assigned to the Commissioner because such facts are not likely to be contentious and also because such proceedings before the Patent Office will usually not involve any third party adversaries. Section 16(4), in a manner similar to s 24(3), is intended to encourage procedures which will reduce uncertainty about the application of the section. Section 16(3) gives an express right of appeal from an adverse finding of fact. This provision ensures that the Commissioner is not named a persona designata to determine the factual issues of s 16.

Notwithstanding the special provisions of s 16, any person who wishes to forestall the possibility that someone else will apply for a patent over a given technical proposal will be able to do so by publicly disclosing the proposal. This will obviate the need for defensive filings of the type that concerned the Ilsley Commission.

4 Inventive Step -- s 12

As suggested earlier, the meaning of novelty under the proposed law will largely turn on the interpretation given to the expressions "form part of... the art" and "available to... the public". While the criterion of inventive step could possibly be extracted from the stipulations of ss 13 and 14 on novelty, the proposed law, following the provisions of EPT art 56, defines "inventive step" as a separate element of patentability.

The requirement that, for grant of a patent, an inventive step must be inherent in the applicant's proposal, has long been an established part of our patent law. It arose as a judge-made policy, based on the theory that a patent is not granted for something which has "only an insubstantial difference over what was already known".* Even prior to the Statute of Monopolies the Privy Council was prepared to invalidate a patent on the ground that it covered only a trifling improvement.**

Whereas novelty requires a simple difference in form, inventive step establishes that there must be more than a minimal degree of difference between an applicant's invention and the prior art. How that minimum is determined in each individual case is one of the most difficult questions arising in the administration of the patent law.

The object of including inventive step as an express criterion under the patent law is, of course, to insure that patents are not issued for things or activities which, in reality, would have been available to the public irrespective of the patentee's contribution. Various judicial tests have been developed to obtain this object. Section 12 of the proposed law follows EPT art 56 in adopting the test of obviousness.***

The test of "not obvious to a person skilled in the art" is a concise reference to one of the most widely applied judicial methods for evaluating alleged inventions. Since it has been adopted under EPT and has been part of US statutory law since 1952, Canada could benefit from jurisprudence that develops in those foreign jurisdictions. The only deviation from the actual wording of the EPT article is the substitution of the past subjunctive "would have been" in the phrase "is not obvious". This change follows the

* Lord Westbury in Harwood v Great Northern Railway (1864) 11 HLC 654 at 682-3.

** Matthey's (or Mathey's) Case (1597) Noy 183, 1 WPC 6 - cf Hulme 12 LQR at p 150: "The patent was disputed by the Cutler's Company, who represented that they ought not to be restrained from using a slight improvement on an old industry."

***Discussed in detail in "The Inventive Step in the EPC" by Joachen Pagenberg, IIC Vol 5, p 157 (1974).

wording of s 103 of the present US Code and highlights the fact that an invention is tested for inventive step on the basis of a hypothetical exercise.

The adoption of the general wording of EPT art 56, however, is not meant to foreclose judicial exploration of the various other tests and considerations which could be developed and applied in order to understand and delineate better the principle behind s 12. Although the proposed law adopts the specific test of obviousness in the application of this test, the larger objectives of incorporation of inventive step as a part of the law should not be lost.

Perhaps an alternate test for limiting the grant of patent rights might be based on asking whether the invention is, in reality, something which was 'readily available' to industry in any event. This type of test would be less likely to confuse the identification of a problem (or a prospective benefit) with the technical solution of the problem.

Section 12 maintains the policy of the present law that inventive step is judged from the viewpoint of all of the known art, including public documents, no matter how obscure. The test for inventive step is not subjective. Patents are not granted on the basis of whether or not the inventor has personally exercised ingenuity. Rather, s 12 affirms that the test is based on a hypothetical search of all of the prior art by an omniscient artisan.

While s 12 follows generally EPT art 56 in stating the test for inventive step, the EPT article goes on to provide that unpublished copending applications are not to be considered as part of the state of the art for the purposes of testing later applications for inventive step. This feature has not been adopted as part of the proposed law.

An earlier draft of the convention contained provisions which operated to the effect that once an application was filed, it occupied not only the ground it disclosed, but all obvious extensions thereon. At a technical conference in the course of developing EPT, this alternative was deleted, apparently on the moralistic ground that an applicant who files an application disclosing an obvious variation over a previously filed application of which he had no knowledge is, nevertheless, subjectively an inventor and therefore entitled to a corresponding patent (Report, Inter-Governmental Conference, April, 1970; p 66).

Since Canadian law has always been that the standard of inventiveness is judged objectively, on the basis of all available public documents, even though obscure, (cf Union Carbide v Trans Canadian Feeds Ltd. et al (1966) Ex CR 884) this provision of EPT art 56 has not been maintained under the proposed law. Instead, by filing an application which ultimately becomes published, an applicant is guaranteed that he is effectively preventing all others from obtaining, on the basis of a subsequent application, rights not only to his own invention, but also to obvious variations on his disclosure.

5 Effect of Secret Commercial Use -- s 15

The foregoing discussion has focused on the definition of novelty used as a criterion for patentability under proposed law. Section 15 adds a further gloss to the definition of novelty. Its effect is to further define and limit the cases where patents may be granted.

Section 15 prevents a patent from being granted to an applicant who has, for a prescribed period prior to filing for a patent, been commercially exploiting his invention. The section applies only in the special case of an invention which has been commercially exploited without its character having been made available to the public. This type of situation is likely to arise with respect to process inventions which are not discernible from the products as marketed.

Section 15 is incorporated into the proposed law on two grounds:

1. patent protection is not needed to assist the commercialization of inventions which are already in secret commercial use;
2. the provision may motivate persons having trade secrets to apply for patent protection, thereby inducing disclosure of trade secrets.

The principle of s 15 has generally been recognized under the law of the United Kingdom. Under the present UK patent act prior, secret use of an invention by a patentee is a ground for revocation (UK s 32(1)e). Ilsley recommended adoption of a similar provision (part VI, s 1(n), p 68). Similarly, in the United States it has been held that exploitation of an invention as a trade secret operates as an abandonment of rights to obtain a patent (Macbeth Evans Glass Co. v General Electric Co. (1917), 246 F 695).

Section 15 allows commercial use to occur for a prescribed period prior to filing. The UK provisions do not directly refer to any period of permitted use, but use for purposes of "reasonable trial or experiment only" is allowed (UK s 32(2)a). In one case, six months' constant use was considered not reasonably necessary (Cave-Brown-Cave's Application (1948) RPC 429). The period prescribed under s 15 should be sufficient to allow inventors to elect for patent protection once commercial operation of an invention is established, but no more.

While patent rights will be available for inventions which have been in secret commercial use prior to the filing of a patent application, s 15(2) follows the policy referred to in discussing the objects of the proposed law (supra p 172). Recognizing that patentees are offered the temporary benefit of a patent monopoly in order to encourage both disclosure and innovation, s 15(2) limits the benefit offered to a patentee who has already brought his invention into commercial production before applying for a

patent. The shortened term provided under s 15(2) will serve as recognition for the disclosure offered by the patentee, but to grant a full-term would be to provide an incentive for innovation where none was needed. Additionally, a grant of full term protection for inventions which are already in commercial use as of this priority date would tend to over-reward patentees in this category. The shortened term provided can therefore be further justified on the basis that such patentees will not incur the typical delay of two to four years often required to get an invention into commercial production.

This chapter defines the basic rights associated with the grant of a patent. Those rights must be read from the chapter as a whole and not from any particular section since many of the sections serve to qualify rights otherwise apparently granted.

1 Objects and Alternatives

The essence of the patent right is the power to exclude others from carrying out specified activities. The present act speaks in terms of the 'exclusive right' of the patentee. The Ilsley Commission preferred the expression 'right to exclude others' as technically more accurate. However stated, an element of exclusivity is an essential characteristic of any patent system.

But there is room for flexibility in determining the scope of that exclusivity.

Traditionally, the scope of the patentee's rights has been based on the concept that the patentee:

"...shall have and enjoy the sole use and exercise and the benefit of the said invention that the said patentee may have and enjoy the sole use and exercise and full benefit of the said invention"

(cf form of grant of UK patents, UK Patents Act, 1949).

These words do not form part of the Canadian statute, nor are they present in the form of the Canadian grant. Nevertheless, the courts of both Canada and the United Kingdom have followed the policy inherent in the above recital when enforcing the rights of patentees.

By way of example, s 46 of the present Canadian statute makes no reference to the right of a patentee to control and limit the importation and circulation of products manufactured abroad through use of a patented process. Yet this right has been consistently recognized by the courts -- (cf Farbwerke Hoechst A.G. et al v Halocarbon (Ontario) Ltd et al, (1974) 2 FC 266).

The words of present s 46 give the patentee the exclusive right to make, use and sell his invention. These categories are disjunctive. A person who carries out any one of these acts will be held to have infringed the patent. Both manufacturers and merchants may be restrained from using, trading or otherwise benefiting from the invention.

At the other end of the spectrum from the concept of reserving to the patentee the 'full benefit' of his invention, the Commission of the Cartagena Agreement has recommended for those countries which are members of the Andean Pact (Bolivia, Chile, Columbia, Ecuador, Peru and Venezuela) a model law in which the sole right of the patentee is the exclusive right to manufacture locally*. No reference is made to the rights of using, selling or importing.

* Decision 85, supra p 46.

A limited patent right, as proposed for the Andean group of countries, would have the advantage that all users of new, patented products, whether consumers or industrialists, would be free from any liability to the patentee. The sale of goods purchased in trade by merchants would, as well, be free from interference from the patentee. The patentee's only recourse would be against the local manufacturer, limiting litigation to the originating sources of any infringing articles. Further, under the provisions of Decision 85, the patentee would have to tolerate competition from importers capable of absorbing the transportation and tariff barriers to importation and this would serve to limit any tendency for the patent right to support the establishment of inefficient industries.

On the other hand, it may be that such provisions will make the patentee's right ineffective since his monopoly position will have been destroyed once infringing goods had left the control of a local infringing manufacturer. The test of such a patent law would depend on whether the damage that arises from loss of control over such infringing goods (introduced into circulation before the local manufacturer can be restrained) would so erode the value of the patent right as to make it ineffective as an incentive to innovation.

Since the proposed law will be subject to close analysis of its actual performance over the first ten years, drastic changes to the patentee's rights of the nature of Decision 85 have not been introduced at this time. The patentee, under the proposed law, will generally retain his traditional powers, subject to special provisions to protect noncommercial uses of inventions and innocent infringers. This will permit the actual performance of the traditional patent right to be evaluated during the ten-year trial period.

While a traditional structure for patentee's rights has been retained, the philosophy of reserving to the patentee the 'full benefit' of this invention has not been followed. Rather, the nature and scope of rights granted patentees have been set according to the objectives of the patent law.

The proposed law contemplates establishing an incentive to invention and innovation through provision of an exclusive right to exploit commercially the Canadian market. These objectives of the law do not necessarily require that patentees be given the full range of traditional rights over their inventions. Rights which are not necessary for advancement of the economic objectives of the law should not be established. Accordingly, the rights of patentees have been limited to prevent their unnecessary imposition on consumers and businessmen whose enjoyment of an invention does not significantly interfere with the patentee's exploitation of the Canadian market.

With these goals in mind, the proposed law, following the structure of the Convention for the European Patent for the Common Market, ie the Common Market Convention (CMC) as a model, uses the exclusionary form for definition of the rights of patentees. In this manner the countervailing interests of patentees and invention-users can be separately identified and better understood.

2 Prohibition of Direct Use -- s 20

Section 20 constitutes the initial broad statement of the basic rights of patentees which are only fully defined when read subject to the exclusions in ss 24 and 25. Section 20(2) of the proposed law, for convenience and clarity, serves as a cross-reference to those sections which complete or otherwise qualify the definition of the patent right being granted. These qualifications are divided into two categories, those which inherently arise on the grant of a patent (ss 24 and 25) and those incursions on the patentee's right arising for independent reasons (chapter 5).

The format of art 29 of the CMC is generally followed in s 20(1) of the proposed law. The wording of s 20(1) has been modified to emphasize that the scope of a patentee's rights depends on the claims which are included in his patent specification. Following the exact wording of art 29 of the CMC would leave open the possibility that the patentee's rights could be influenced by the actual nature of his invention, rather than the actual subject matter than he claims.

Omitted from the provision of s 20(1) are the provisions of article 29(c) of the CMC giving exclusive rights to the patentee to control products "obtained directly by a process which is the subject matter of the invention". This omission follows the recommendation of the Ilsley Commission (pp 63-65) and reflects the position of patentees under the present US law (35 USC, s 271). The Banks Committee, as well, recommended against protection of the type afforded under art 29(c) of the CMC (Banks para 297).

The objection that the patent right in the case of a process invention will be incapable of providing any protection, and therefore any incentive, to Canadian industry to adopt new technology of a process-related type, is met by the provisions of s 22 of the proposed law.

3 Contributory Infringement -- s 21

While one object of the proposed law is to establish only those rights which are economically justifiable, s 21 of the proposed law is included to ensure that patentees have the capacity to enjoy realistically the benefits of such rights as are granted. This section, in effect, adopts the concept of 'contributory infringement'.

The present law, as developed in the courts, is that persons are liable to a patentee only where they are joint tortfeasors acting together with an actual infringer, or where a person actually procures another to infringe.* Cases may arise where numerous

* Slater Steel Industries Ltd. v R Payer Co Ltd (1968) 55 CPR 61

instances of infringement occur because a single source distributes the means to affect such infringement. It is more efficient to allow the patentee to move against that single source, and thus settle the issue of infringement in one legal action, than to force the patentee to sue numerous individual infringers.

Hisley recommended against incorporation of such a provision without providing any reasons or argument on the point (p 107-8). However, contributory infringement has long been recognized under the US patent law (US code s 271), and has been expressly adopted as a provision of the CMC (art 30). Proposed s 21 has been modelled on art 30 of the CMC.

The reference to CMC art 30(1) to "the other person" has been substituted in s 21(1)b of the proposed law by the words "the third party". This deviation has been made in order to clarify that the liability of a contributory infringer depends on his own knowledge, rather than on the knowledge of the actual users who are infringing.

The policy of art 30(2) of the CMC has not been followed in s 21(2) of the proposed law. Rather, instead of maintaining the right of the patentee to restrain distribution of means for exploiting an invention in a noninfringing manner, the proposed law proceeds on the basis that the patentee has no right to interfere with acts which constitute permitted use of an invention under the law. A similar conclusion was reached by the US Supreme Court in refusing to apply the US contributory infringement provisions against a company manufacturing parts for assembly and use outside the country (cf DeepSouth Packing Co v. The Laitram Corp., 406 US 518, (1972)).

In the United Kingdom, following the recommendation of the Banks Committee (para 272), the UK has also decided to amend its national law to conform with the CMC provisions in adopting contributory infringement as part of the UK Law (UK White Paper, p 5, para 18).

4 Acts of Importation -- s 22

As indicated earlier, one of the objections to defining the patentee's rights without reference to a power to control circulation in Canada of products made abroad through use of a patented process is that the absence of such protection will neutralize any patent incentive to adopt new process-technology in Canada. Section 22 of the proposed law represents a compromise which provides such protection, but only when the need arises.

This provision is similar in effect to the present provisions of the United States Tariff Act (19 USC s 1337). These provisions dealing with unfair practices in import trade allow a patentee to request the US International Trade Commission to add to the tariff schedules, as articles forbidden to be imported, the product of a foreign manufacturer made by a process patented in the US.

The conditions under which this may be done are set out in the tariff act as follows:

"S 1337 UNFAIR PRACTICES IN IMPORT TRADE

(a) UNFAIR METHODS OF COMPETITION DECLARED UNLAWFUL
Unfair methods of competition and unfair acts in the importation of articles into the United States or in their sale by the owner, importer, consignee, or agent of either, the effect or tendency of which is to destroy or substantially injure an industry, efficiently and economically operated, in the United States, or to prevent the establishment of such a industry, or to restrain or monopolize trade and commerce in the United States, are hereby declared unlawful, and when found by the President to exist shall be dealt with, in addition to any other provisions of law, as hereinafter provided...

"The importation hereafter for use, sale or exchange of a product made, produced, processed, or mined under or by means of a process covered by the claims of any unexpired valid United States letters patent, whether issued heretofore or hereafter, shall have the same status for the purposes of s 1337 of this title as the importation of any product or article covered by the claims of any unexpired valid United States letters patent."

Recent amendments give the Commission power to issue cease-and-desist orders to prevent further damaging importation.*

Section 22 of the proposed law does not create liability for damages arising from any acts of importation which occur prior to the issuance of the prohibitory order. However, once such an order is issued, violation of that order qualifies as infringement and the patentee will be entitled to damages in addition to the right to pursue contempt of court proceedings.

Even where such an order has been issued, goods to which exhaustion applies will still be entitled to enter the country freely, pursuant to the provisions of s 22(4) and 25(1) of the proposed law. Since the inclusion of the exhaustion provisions of s 25 of the proposed law is premised on preventing patentees from relying on patent rights to protect economically inefficient industry in Canada and since s 22(2) requires that the patentee demonstrate working of the patented process in Canada before steps can be taken to limit importation, the section should generally have the equivalent effect of the US tariff act provisions, protecting only established, efficient industry in Canada.

* The Trade Act of 1974 (Public Law 93-618), reported in Bureau of National Affairs, Patent, Trademark and Copyright Journal vol 210, pp A-13, E-1.

Section 22 divides the procedure for obtaining an order to prohibit further importation into two stages, requiring steps to be taken both before the Patent Authority and the Federal Court. Section 22(1) gives jurisdiction to the Federal Court to grant the actual order since a factual issue (whether products are actually produced outside of Canada by the patented process) must be decided in order to support issuance of the order. Such a fact-finding procedure is appropriately assigned to a court.

Under s 22(2) the Patent Authority is charged with determining whether or not the patentee is actually working the patented process in Canada on a commercial scale. This is a question involving not only matters of fact but also economic criteria. Accordingly the Authority, as a quasi-judicial administrative tribunal, is charged with making this evaluation. Further, under s 22(3) the Authority has jurisdiction to impose conditions upon the grant of a certificate in accordance with such administrative policies as are approved by order in council.

Section 22(5) gives status to licensees who have obtained compulsory licences under s 53 to obtain the benefits of the protection of s 22. In the case of voluntary licensees, the parties may negotiate for an obligation on the part of the patentee to take proceedings under s 22. Section 22(5) ensures that licences obtained on the basis of the failure of the patentee to establish local working in Canada will carry with them the protection inherent in s 22.

5 Compensation Right Prior to Grant -- s 23

Elsewhere in the proposed law (s 40), provisions are included establishing early publication of patent applications prior to examination and grant. Further, the patent term under the proposed law will run from the applicant's priority date as established by his first filing of a patent application respecting his invention (s 26). Section 23 grants patentees an interim right to compensation for use of an invention prior to actual grant of a patent. This section is included in order to complement these other provisions and to prevent them from operating as an injustice to patent applicants.

The Banks Committee summarized the argument in favour of according patentees interim rights covering the period after publication while applications are pending as follows (p 83, para 290):

"...failure to accord any right would mean, in effect that the potential patent would be subject to free licences for the period between publication and grant. It would thus be open to any person to pirate the invention with impunity during this period."

The Banks report cited as a further argument the fact that giving rights on early publication is a developing international trend (p 83, para 291).

The provisions of s 23 of the proposed law follow the equivalent provisions of CMC art 36. The effect of the provisions of s 23 are hardly different from the protection obtained by patentees where they apply under the present law to obtain interim protection pending adjudication on an allegation of infringement under an issued patent. The courts are very hesitant to grant interlocutory injunctions on the basis of patents which have not been tested in litigation or been honoured by extensive licensing. But, once liability is established, they will order that damages be paid covering the interim period prior to judgment.

Section 23(5)a gives statutory authority for the procedure by which defendants undertake before the court to keep an account of actual use of an invention pending completion of a full patent trial. Section 23(5)b goes a little further, allowing the court to order that security be posted to cover potential liability arising from use of an invention. Under no circumstances will the patent applicant have a right to obtain an injunction on the basis of a pending application that has not been issued as a patent.

This is in contrast to the provisions included in the report of the Ilsley Commission which would have given an applicant, after publication, "the like privileges and rights as he would have had if a patent for the invention had been granted on the date of the publication of a complete specification." (part IV, s 7(6), p 47).

Further, s 23(2) ensures that no payment is due until it is certain that a valid patent exists. Since liability under section 23 arises only from the time that actual notice of the patent application exists, as stipulated in subsection 23(2), and since subsequent provisions (s 43) give members of the public the right to intervene and oppose the grant of a patent, the overall effect of s 23 will be, in some cases, to shift the issue of patent validity in a confrontation between patent applicant and invention-user to the initial forum of the Patent Office. At least this alternative will exist as an option to the procedure of challenging the validity of a patent once issued before the courts.

Consistent with the policy adopted subsequently with respect to compulsory licence provisions (s 57), section 23(3) of the proposed law stipulates the basis upon which compensation will be paid to the patentee as that which a willing licensor would pay to a willing licensee. Jurisdiction to determine the rate of compensation, on the basis of the willing licensor - willing licensee criterion is assigned to the Patent Authority since, as this involves economic issues, it is a matter for an administrative tribunal to decide. The patentee may, however, resort to the court to enforce the obligation to pay.

Section 23(4) deals with what is referred to in the Banks report as the main objection to the granting of rights on early publication

(p 83, para 292). The scope of the patent applicant's rights are defined, following the conclusion reached under EPT art 69(2), by the latest filed claims on record, and subject retroactively to the final version as actually approved on grant. The reference in s 23(4) to intervening rights arising under s 52 will be discussed subsequently in association with the later section.

Section 23(7) assures that the Court will have jurisdiction to direct that the Patent Office will give priority to the examination of applications involved in interim right proceedings. Section 23(8) removes any doubt that use of an invention during the interim period pending grant of a patent will not form the basis for escaping liability to an injunction, once a patent is actually granted.

6 Noninfringing Acts -- s 24

Sections 20 through 23 of chapter 2 define the positive aspects of the rights accruing to patentees upon grant of a patent. Those provisions, however, do not constitute the complete definition of such rights. Section 24 contains a series of express exclusions which, along with the provisions of ss 25 through 27, complete the definitions of the rights accorded patentees.

The provisions of s 24 under the proposed law follow in form the provisions of art 31 of the CMC. Subsection 24(1)a differs from art 31(a) in that the inclusion of the reference to "non-commercial purposes" is intended to clarify that the rights of patentees are limited to the commercial exploitation of inventions. This same reference appears again under s 24(1)b, where the right to carry out experiments utilizing an invention is intended to be mutually exclusive with respect to the right of the patentee to exploit his invention commercially.

Article 31(c) of the CMC limits the effects of a community patent preventing rights from extending to the following:

"31(c) the extemporaneous preparation for individual cases in a pharmacy of a medicine in accordance with a medical prescription nor acts concerning the medicine so prepared."

This rather compendious and considerably qualified limitation has been replaced in the proposed law by the provision that patents shall not extend to:

"24(c) the administration of a medicine or its preparation in individual cases for such use;"

The provision of s 24(1)c in effect adopts and amplifies the concluding words of art 31(c) and maintains the policy referred to in the discussion respecting s 17(1)g of the proposed law. The reference in the CMC to protecting pharmacies is unnecessarily limiting, since infringement will turn upon the status of the person

preparing the medical substance. Under the proposed law, it is the immediacy of ultimate use that governs.

Subsection 24(1)d implements Canada's obligations under the two treaties mentioned therein. The wording of s 23 of the present act has been followed with the addition of express reference to the provisions of the conventions in order to ensure that such provisions have the full force of law in Canada. By making such express references, the courts will have additional freedom to interpret these provisions in the context in which they arise.

Articles 5ter of the Paris Convention and 27 of the Convention of International Civil Aviation (Chicago convention) are set out in full in appendix E hereto.

The rationale for incorporation of the provisions found in ss 24(1)e, f, and g has been set out previously in this working paper in part 2, under the heading "Analysis of Policies Applied -- Limitations on Rights Granted". The policy of subsections e, f, and g are consistent with the provisions of s 32(4) of the present Combines Investigation Act. That section provides that with respect to certain basic anticompetitive activities:

"...the court shall not convict..if the conspiracy, combination, agreement or arrangement relates only to the export of articles from Canada;"

In effect, the law recognizes that rights or restraints, as the case may be, should not futilely be imposed under circumstances where such imposition will not significantly advance the implementation of national policies. This was one of the arguments relied on by the successful exporter in the Deepsouth Packing Co. decision, cited earlier (supra p 199).

Section 24(2) reflects the similar reference in s 17(2) of the proposed law and is intended to ensure that the exceptions of s 24 will not be artificially used or enlarged to shield otherwise infringing activities.

Section 24(3) is included in order to assist both patentees and persons carrying on activities which may fall within the exclusions of s 24 to clarify their respective positions. By registering the fact that production is being carried out with the purpose of ultimately exporting a product, a manufacturer will gain the advantage of the prima facie presumption permitted under the section. At the same time, patentees will be put on notice of the fact that use of the invention covered by their patent is taking place in Canada. Any doubt as to the bona fide application of the provision of s 24 can then be settled at an early stage.

7 Exhaustion -- s 25

The philosophy supporting incorporation of the provisions of s 25 has been set out earlier in this working paper, under the title

'Analysis of Policies Applied -- Exhaustion of Patent Rights', (supra p 141).

Section 25 generally follows the policy established under art 32 of the CMC. Exhaustion, under these provisions, arises both where the Canadian patentee is the originating source of the exhausted goods and where a licensee introduces such goods into the marketplace.

Section 25(1) refers to "goods" rather than products in order that the section operate both against patented products, as claimed, and unclaimed products of a patented process which otherwise would be subjected to an order under s 22. No reference is made under s 25(1)b to goods which have been produced by means of a product which may be the subject of a claim under a Canadian patent. While it may be arguable under present jurisprudence that the present law recognizes a right against goods so made (cf Ilsley p 63-65; and the article by H. Geoffrey Lynfield "Infringement in Great Britain by Importation of Transformed Products", Patent and Trademark Institute of Canada Proceedings, series 7, vol 17, p 12) the express exclusion of any reference to such a right under the proposed law should prevent claims to such a right arising.

Section 25(2), through its definitions of related persons, extends the concept of 'simple exhaustion' beyond the provisions existing under present UK and Canadian law. Rather, full exhaustion applies wherever the beneficial owner of a patent, directly or indirectly, has had the opportunity to profit from the introduction of patented goods into the marketplace.

On the basis of this criterion the definition of related persons extends under s 25(2) to assignees and predecessors in title to rights under the Canadian or any corresponding patent. Presumably, the patentee on selling his patent rights will negotiate for a price which takes into account the future earning potential of such rights. Since the patentee will have received compensation for all future use of the invention, it is appropriate for exhaustion to apply on all goods originating from the assignee. Section 25(2), in effect defines related persons by tracing out the entire chain of title or interest in the patented invention, both geographically and over time.

Section 25(4) is included to ensure that, should difficulties arise in the future with respect to the exact limits of the definition of related persons, directions may be given by regulation clarifying such uncertainties.

Section 25(3) extends the definition of related persons under the special circumstances where two patents issue for the same invention. As discussed earlier with respect to ss 14(4) and 14(5), such multiple patents will be permitted under the proposed law on the understanding that they will be treated as if they had common ownership.

For certainty, s 25(5) forecloses any continuation of the provision of the present law which allow restraints to run with goods where appropriate notice is communicated to the purchaser. The section applies at two levels. First, any restraints or limitations imposed by a patentee on a related person are intended not to affect the capacity of that related person to create exhausted goods by introducing such goods into the marketplace. Further, any attempt by either a patentee or a related person to impose restraints on the first purchaser of goods will not affect the exhausted status of such goods.

It may be that under the law of some foreign jurisdictions, the patentee or related person may be able to enforce contractual rights respecting limitations on sale or use of goods in restricted territories. While it is not proposed that Canadian law should interfere with enforcement abroad of contractual rights assumed abroad, the provisions of s 25(5) ensure that no effect will be given in Canada to arrangements which run contrary to the general exhaustion policy of the Canadian law.

Section 26(b) introduces a rebuttable presumption that exhaustion applies with respect to any goods introduced into a market where local patent rights exist with respect to such goods. This provision is intended to facilitate arbitrage with respect to exhausted goods. It differs from the effect of the proposal of the Economic Council in that the patentee will still be entitled to prove in a Canadian court that neither he nor a related person authorized the initial sale of the goods in issue. But the burden of proof in such cases will be on the patentee and not on the importer. This should limit any tendency on the part of patentees to harass importers of exhausted goods by forcing them to prove in litigation that the goods are, in fact, exhausted.

8 Term of Protection -- ss 26, 27

Section 26 establishes the maximum duration of patent rights under the proposed law and, as well, the conditions which must be met to maintain the patent right. A total period of 14 years is available for patentees who are prepared, either directly or through licensing to arrange for the adoption of the invention by industry within Canada, and who otherwise meet the requirements of s 26 as to the paying of maintenance fees and the filing of information returns. Section 27 limits the term to nine years for patents which are not by the end of that period being worked in Canada.

8.1 Commencement of Term

The present act provides that patent rights shall last for 17 years from the date of grant. One substantial change inherent in s 26(1) is the provision that the term of protection runs from the priority date, a date fixed in time, rather than from the date of grant.

* defined supra p 111.

Both Ilsley and the Economic Council recommended that a change of this type be made. The disadvantages of the present system of delaying commencement of the patent terms until grant were discussed earlier in this working paper under the title "Need for Reform--Term" (supra p 116).

The stipulation that the term should commence from the earliest date of filing of an application upon which an applicant relies for purposes of establishing a priority date was endorsed both by the US President's Commission (p 54) and by the Banks Committee (p 98, para 344). Concern was, however, raised in both these reports that such a provision would require amendment of art 4 bis(5) of the Paris Convention.

8.1.1 Commencement of Term -- Paris Convention

The right to establish a priority date effective throughout the Union based on the filing of an initial patent application with one member country has always been one of the fundamental features of the Paris Convention. The concept of the right of priority, as formulated at the 1883 conference, was to ensure that national applications filed with a claim to the right of priority would be treated as if a local national filing had been effected on the priority date. In other words, the filing of an application in one of the countries of the Union was to be considered a constructive filing in other countries of the Union as well.*

At the conference in London in 1934, art 4 bis(5) was introduced into the Paris Convention. That article provides as follows:

"4 bis(5) Patents obtained with the benefit of priority shall have in the various countries of the Union a duration equal to that which they would have had if they had been applied for or granted without the benefit of priority."

This provision appears on its face to suggest that it would be improper under the convention to tie the patent term to commence from the date claimed by an applicant pursuant to the priority provisions under the convention. If such an effect is given to the provisions of art 4 bis(5) then the result may be that the convention imposes a startling inequality between foreign and national applicants in national patent systems.

The convention period available under art 4C(1) is presently twelve months for patents (originally it had been set at six months). If the term of patent protection runs from the date of actual filing with a national patent office rather than the initial priority filing, then foreign applicants who rely on the convention priority period, in effect, benefit from a one-year longer term of protection than national applications. This is so because they are entitled to wait an extra year before making the local filing which will start the term of local protection running.

* Cf Stephen P. Ladas, "Patents, Trademarks, and Related Rights", Harvard University Press, 1975, p 460-2. See also present s 29.

The effect of art 4 bis(5), on the interpretation suggested above, is to encourage every person applying for a patent to take advantage of the full delay of the convention year. Sample statistics from the Canadian Patent Office indicate that two-thirds of all convention filings are received in the last month of the convention year. While it is accepted that foreign applicants are entitled to delay local filings for up to one year under the convention, they should not be encouraged to do so by rewarding delay with an extended term.

The first-view interpretation of art 4 bis(5) should not, however, be accepted as governing. While the wording may appear inconsistent with a provision by which the term of patent protection runs from the priority date, the section could be interpreted in the context of the convention as a whole as intending to mean that foreign applicants will not be subject to penalties which will drastically shorten the term of patent protection available to them, simply because they have applied for a local patent, relying on a convention priority right.

While it would be desirable to effect amendment to the actual wording of art 4 bis(5), this amendment may not be essential. The proposed law adopts the policy of running the term of protection under s 26(1) from the priority date as being consistent with the general principle of the convention of assuring equivalent treatment for both nationals and foreigners under any national patent system.

Use of the priority date as a reference point under art 26(1) might also be understood to fall outside the technical wording of art 4 bis(5) if 'priority date', as a special expression under the proposed law, were adopted as a reference point assigned to every application based on an act of filing a disclosure of the invention. This is in contrast to the scheme of the convention by which priority date is a 'benefit' which may be claimed at the option of an applicant. The proposed law has not been structured in this manner, but this option is available.*

Having dealt with the basis for selection of the starting point for the term of patent protection, the duration of that term as proposed will now be discussed.

8.2 Duration of Term

As indicated previously, the present law grants a 17-year term. The trend in Europe, both under the EPT and according to the proposals in the UK White Paper, is to adopt a patent term of 20 years. Ilsley recommended retention of the term of 17 years as being "both long enough and short enough" (p 60). The Economic

* A provision to this effect governed the maximum permissible extension available under Canada's post-war adjustment legislation-- Statutes of Canada, 1947, c 23, S 7, adding s 28A to the Patent Act.

Council, as well, appeared to recommend retention of the 17-year term (p 88), suggesting also that the choice of any one period is as much an historical accident as anything else (p 73). The Council's concept of a "proper term", however, deserves closer examination.

While suggesting (p 73) that it is not now possible to quantify precisely the number of years required to provide the degree of protection needed to induce resources to flow into invention and innovation, the Economic Council did observe that it could be logically argued that (p 54)

"...It is in Canada's self-interest to grant only enough protection as will ensure that useful and new products and processes will be introduced to the Canadian market."

The Economic Council also recommended that compulsory licences of right to manufacture locally should be available after five years from the first commercial use of an invention. This period of five years was endorsed as an adequate 'head-start' for patentees who are prepared to bring new technology into production (p 92). Therefore, the Economic Council felt that five years of exclusive monopoly from first use followed by a right to receive royalties for up to 12 years, based on use of the invention by industry in Canada, would be a sufficient total incentive.

In determining the minimum period which would serve as a reasonable incentive to encourage commercial adoption of a new invention, attention should be focused on the extent to which the extension of term serves as an incentive.

If a decision is to be made by an industrialist whether to adopt an invention, and if the patent right is to be taken into account, the industrialist will have to include in his considerations the present value of prospective monopoly profits which he anticipates will arise in the future. The weight that will be accorded to such prospective profits (and therefore the incentive force of the patent right) will depend on the duration of patent protection. By its very nature the incentive force of the patent right therefore depends upon the discounted present value of future profits. For purposes of discussion a steady rate of profit may be assumed.*

* It might be argued that a successful invention may find an expanding market, a market which will generate increasing revenues as time passes. But such circumstances do not argue for an extended term of patent protection. If the potential success of such an invention is apparent at the time of the initial decision to proceed with its commercialization, then the introduction of an increased patent incentive would be redundant. And if the potential success of such an invention was unforeseen, extension of the term of the monopoly right into the future would not result in a corresponding increase in the incentive to invest.

As an example of the discounted value of future profits, a dollar earned five years in the future, discounted at 8% per annum (compounded annually) is worth 68¢ today. A dollar earned 20 years in the future, discounted at the same rate, is worth 21.5¢ today. A law of diminishing returns is therefore associated with any attempt to increase the incentive effect of the patent right by extending the patent term.

These considerations, coupled with the inherent uncertainties of the marketplace which would lead entrepreneurs to doubly discount distant future profits, argue against reliance on the prolongation of monopoly rights into the distance future as an incentive to induce preferred behaviour today. The Economic Council's estimate that a five-year period of unqualified monopoly may be sufficient to provide an adequate incentive for the introduction of new products into the Canadian market is consistent with this analysis.

Applying these criteria and accepting that the patent right is created as an incentive not only to induce the creation but also the early exploitation and adoption of new technology, the proposed law provides for a term of 14 years, divided into an initial term of 9 years and a subsequent period of up to five years conditioned on the existence of local working.

8.2.1 The Initial Term

The initial term of nine years has been selected as a reasonable minimum for accommodating the provisions of art 5A of the Paris Convention. Under that article, a patent may not be terminated on grounds of failure to work locally until a minimum of five years from grant.* It is expected that with improved application procedures, most, if not virtually all applications can be examined and disposed of within the first four years. The combination of these figures therefore gives a total of nine years for the initial term.

The initial nine year period can also be obtained in another manner. Once an invention has been made and a patent application filed, then businessmen must face the decision whether or not to complete the development work and invest in the production facilities necessary to apply the invention as a commercial, industrial process. Various types of inventions, according to their nature, may take varying lengths of time in order to reach the commercial production stage. Statistics have, however, shown that a substantial number of inventions can be put into use within a few years after the date

* The effect of arts 5A(3) and (4) is that a compulsory licence must have been granted for two years before a patent can be terminated for non working and that a compulsory licence for non working must not be made available earlier than three years from grant.

of filing of an application for a patent. Chart 4-1 in the Economic Council's report (p 77) indicates that under the present law approximately three-quarters of Canadian patents eventually put into use in Canada are already being worked at the date that the patent is granted. At the same date, 90% of the patents which will eventually be worked somewhere are already in use.* The period of pendency for applications in Canada in most cases has been of the order of two to three years.

These statistics suggest that for approximately 80% of the inventions which prove viable, the pay-back period (during which the patentee is supposed to be recovering his prior costs through the sale of products arising from the invention) will have commenced by the fourth year from priority date.** Therefore, inclusion of a period of four years from priority date in the patent term would guarantee to patentees, in most cases, the same benefit as running the period of exclusive rights from first commercial use (proposed by the Economic Council and rejected as inappropriate for the reasons given in part III of this working paper, supra pp 108-111). Again, the combination of the initial four-year period with the five years proposed by the Council gives a total of nine years for the initial term.

While under either argument exceptional cases in which grant is delayed beyond four years may arise, it is felt that these hard cases should not be allowed to disrupt the general rule. In any event, patentees who eventually obtain grant of a patent will be entitled, under s 23, to compensation for any interim use of their invention following the early publication of their application. It is later proposed (cf infra, p 225) that this date of early publication should be no later than 18 months from priority date. Therefore, interim rights to compensation would invariably commence within the four-year period.

8.2.2 The Extension

The five-year period of extension beyond the first nine years will serve as an incentive for the bulk of Canadian patentees who are foreigners to arrange for the adoption of their invention by a manufacturer in Canada. In this manner, the relative domination of the Canadian patent system by foreign patentees may, at least to some small degree, be turned to Canada's advantage.

* Similar statistics were obtained in a US survey, "Speedy Entry of Patented Inventions into Commercial Use", Barkev S. Sanders, IDEA, fall 1959.

** This allows for one year of delay arising from reliance by an applicant on the convention period.

As indicated above, by the end of the ninth year most (90%) foreign patentees with viable inventions will have already enjoyed over five years of commercial exploitation of their patent rights. Again according to the statistics compiled by Firestone (supra p 68) and included in the Economic Council's report (p 62), by the end of the ninth year, foreigners, in two cases out of three, will have exploited their inventions on the basis of production facilities established outside of Canada. As a corollary, it would appear likely that such inventions will have been exploited on the basis of supplying the world market, or at least major foreign markets which are substantially larger than the Canadian market. Since the ability to recover the special costs of invention and innovation is dependent on both the duration of patent protection and also on the territorial scope of such rights, the foreign patentee will, by the ninth year, have had a substantial opportunity to recover his special 'sunk costs' by exploitation of the world market.

By way of contrast, however, a Canadian industrialist, due to the small size of the Canadian market, will not have had an equivalent opportunity to recoup his investment. A Canadian industrialist working an invention during the five-year extension of the patent term will not realistically be able to exploit the world market as easily as foreign patentees whose production facilities are initially based within larger markets. The five-year extension of the patent term will give indigenous Canadian innovators a further period in the smaller Canadian market to make up for this deficiency.

More significantly, the five-year extension will also assist Canadian licensees in their adoption of foreign-controlled technology under licence. While the adoption of an invention under licence may not involve the same extraordinary start-up costs as are associated with originating an industrial innovation, some special costs will nevertheless exist. Besides the difficulties which would normally be faced by any Canadian industrialist in tooling up for and making marketing arrangements, the Canadian licensee's legal right to supply such markets in competition with the patentee may be foreclosed by various local patents which preclude exportation to such markets. Allowing for the relatively limited territorial scope of the Canadian patent right, it is anticipated that the five year extension should provide an adequate incentive to encourage the adoption under licence of new technology controlled by foreign patentees and to allow recovery within the Canadian market of the special costs associated with the adoption of inventions by Canadian industry.

It was these factors, combined with the desire to minimize the costs while maximizing the incentive to transfer knowhow and technology that suggested the additional five year term. The sum of 9 plus 5 or a total of 14 years is the term originally granted in the US, UK and in Canada and accordingly seems to be appropriate.

Chapter 1 defines the type of patentable subject matter that will support the grant of a patent. Chapter 3 deals with right of access to obtain benefits under the law, and the steps which must be taken by an applicant.

1 Entitlement to a Patent -- s 30

Section 30 continues the policy of the present law that patents will only be made available to inventors or persons claiming title under inventors. This is opposed to the concept of granting rights to persons who import ideas that they have learned from others abroad, a policy reflected in the past under the laws of the UK, Belgium and other countries which recognize 'patents of importation'.

By reason of the limitation that only true inventors (and their assignees) may apply, the proposed law would more properly be described as a 'first-inventor-to-file' system, rather than a 'first-to-file' system. A person who makes a disclosure in confidence prior to filing need not fear under the proposed law that his confidant will attempt to file an application based on the disclosure. Such an application would not be by an inventor and therefore would not support grant of a valid patent.

Subsection 30(1)b replaces present s 33 and reverses the policy of the present law. Under the present act, all inventors must be party to an application, unless it is shown that they cannot be found. Such a provision could lead to delay in the filing of applications under the proposed law. Since the new law adopts a first-to-file system, all impediments to speedy filing have been minimized. Under ss 30(1)b,c and d, any person having an interest in an invention may initiate the patent application procedure. Subsequent provisions (s 84) allow nonrepresented parties to claim rights under an application or patent, on the basis that the first applicant is deemed to be acting as a trustee.

Subsection 30(1)c deals with the case of the employed inventor. Subsequent provisions (s 86) codify the present common law provisions under which employers acquire all rights and inventions made by employees who have made inventions while acting within the scope of their duties. Rather than force employers to obtain the cooperation of employees as a condition precedent to filing an application, s 30(1)c gives the employer status to file such an application, allowing disputes on entitlement to be settled subsequently.

Section 30(2) contains an additional proviso for applicants, not existing under the present law. 'Convention Country' is defined under s 2 to include any country with which Canada has established a bilateral agreement. The combined effect of these provisions will enable Canada to obtain reciprocal rights for Canadian inventors in countries which are not members of the Paris Convention. Agreements of this type presently exist, for example, between Canada and India.

Section 30(3) deals with the procedure by which entitlement under s 30 may be established. The qualification "before the Patent Office" is intended to limit the operation of the regulations, so that they will not encumber a court in reaching any decision whether facts under s 30 have been established.

Regulations under s 30(3) will, however, define the standards and means of proof that the Patent Office may require of an applicant.

2 Form of Application -- s 31

Section 31(1) assigns broadly to regulations the power to define proper filing procedure. The criteria for a proper filing will be of considerable importance since an applicant will only acquire a priority date through such a filing. The present twelve-month period stipulated under present s 32 for completing an application will be replaced by regulations which will be able to deal with pregrant requirements with greater flexibility regarding deadlines. The need under the present law to set statutory maxima for certain steps in the granting process will not be as crucial under the proposed law, since the period of protection will start to run against an applicant when he establishes his priority date.

Section 31(2) and (3) provide reference to essential information which should accompany an application. The basis of the status of the applicant to apply is, of course, essential. The reference to the specification, subsequently defined under s 34, is essential to establish disclosure of the invention for purposes of a priority date.

3 Designation of Inventors -- s 32

This section amplifies the policy referred to in the discussion respecting s 30(1)b. However, s 32(1) gives relief in the case of an application which does not qualify with the requirements of s 31(2) by reason of failure to identify properly all inventors.

Identification of inventors may sometimes be a difficult problem, particularly where numerous persons in a company have worked on a problem over time. Rather than invalidate a patent on the basis of failure to identify fully all inventors, s 32 preserves the existence of the patent for the benefit of properly disclosed person who actually hold an interest in the invention. The right to amend the designated inventors in an application is recognized under the present act, in ss 33(3) and (4). Under the present law, however, the validity of a patent, where inventors are incorrectly identified is uncertain. Subsequent provisions in the proposed law (s 77) expressly extend the policy of allowing amendment to the designation of inventors in order to allow patentees to preserve the validity of patents subject to such a defect.

Section 32(4) deals with the difficult case of a dispute between parties regarding entitlement to be included as applicants or named inventors in an application. Rather than have the Commissioner assume responsibility for a contentious factual issue of this kind, the proposed law assigns the dispute to the Federal Court. While such instances have rarely arisen, it is appropriate for a court to deal with such a complex fact-finding procedure.

4 Priority Date -- s 33

The minimum prerequisites for establishing a priority date are important criteria under the law. Section 33 affirms that a priority date will be given to an application if it meets the minimum standards of s 31.

Section 33(2) meets Canada's obligation under the Paris Convention to recognize for priority purposes earlier filings in convention countries.

Convention priority, while recognized, is not of major significance under the present act. Present procedures do not require proof of the facts supporting such claim to priority until a need arises. Under the proposed law, due to the substantial number of foreign filing received in Canada, virtually every application will have to be scrutinized in order to evaluate its claim to a priority date.

Section 33(2) states that the priority date of an application shall be the date of the first filing in a convention country of a disclosure which "conforms" to the disclosure tendered as the required specification under s 31(3). The word "conforms" will become a term of art under the proposed law. It is intended to accommodate some deviation between the disclosure in the priority document and that of the Canadian specification. The expression also arises with respect to the scope of amendment permitted for a specification under the proposed law (s 38).

Section 33(3) fulfils the same rôle as s 30(3), ensuring that the Patent Office will have authority for the procedures by which it determines priority date under s 33(2).

Section 33(4) applies the policy of article 4C(4) of the Paris Convention, Stockholm revision. In effect, an applicant has the right to abandon an earlier application for priority purposes if he is prepared to run the risk that his invention may have become available to the public in the interim. While Canada is not a signatory to this provision of the Stockholm revision, it has been incorporated in the proposed law in recognition of the fact that Canadian applicants may wish to follow such a procedure before the Canadian Patent Office for the purpose of obtaining patents in foreign countries.

Section 33(5) recognizes that, for priority purposes, the status of a disclosure under foreign law is irrelevant. The definition of "application" under s 33(5) gives recognition to any disclosure

which is authoritative regarding its date of filing and which reflects the intent of the applicant to obtain protection for his inventions. On this basis, the further qualification of art 4I(2) of the Paris Convention, Stockholm revision, referring to the necessity that patents be available as an alternative to inventors' certificates has not been incorporated. Such a requirement would, for the purposes of the section, be redundant.

5 Disclosure Requirement -- s 34

This section represents one of the major instances in which the flexibility of reliance on regulation-making power to define detailed requirements under the law will be of maximum advantage in the future. The preamble to s 34, stating that disclosure requirements are to be prescribed by regulation, gives statutory authority to such regulations. The recital of the balance of the provisions of s 34 as objects give guidance on the nature of such regulations. The objects follow substantially the statutory provisions for disclosure under the present act, s 36 and the principles expounded by President Thorson in the Exchequer Court decision, Mineral Separation North America Corporation v Noranda Mines Ltd (1947) Ex CR 306*.

5.1 Disclosure Requirements on Filing -- s 34(1)

Section 34(1) establishes a lower standard for a disclosure that accompanies an application on filing than that required under s 34(3) at the time of grant. This lower standard recognizes the difficulties in preparing applications under a first-to-file system and will allow applicants to establish a priority date with only the absolute minimum of disclosure.

Subsection 34(1)a permits either the principle of the invention or a specific embodiment to be disclosed. Subsection 34(1)b states that as an absolute minimum, the initial disclosure must be sufficient to allow a search of the state of the art. Under the last subsection, 34(1)c, claims are expressly required. This last provision deviates from the practice under UK provisional applications which do not require claims. However, claims are useful as devices for determining the nature of the invention and scope of search required. Subsequent amendment procedures (s 38) ensure applicants opportunity to amend claims after filing.

The nature of claims under the proposed law differs from that established under the present law, as applied in the courts. Present s 36(2) provides as follows:

"36(2) The specification shown shall end with a claim or claims stating distinctly and in explicit terms the

* Cited in the Ilsley Report as an exhaustive statement of patent disclosure requirements under the law (p 44).

things or combinations that the applicant regards as new and in which he claims an exclusive property or privilege."

However, following the tradition of earlier British jurisprudence, claims are also treated as if they were definitions of the patentee's invention. Invention in this sense refers to articles or processes rather than principle by which an advance or advantage over the prior art has been obtained. Subsection 34(1)c avoids ambiguity by emphasizing that claims no longer constitute a statement of the invention, but rather are only intended to define or characterize the physical articles or activities that exploit, apply or incorporate the invention. This same policy is applied as well in s 34(4), governing the form of claims at time of grant of a patent.

5.1.1 Microorganism Depositories -- s 34(2)

Section 34(2) recognizes that disclosure of an invention incorporating use of a unique microorganism may not make the invention available to the public unless samples are available. Depositories for microorganisms presently exist in the United States, Japan and in Europe. A draft convention is now under review within WIPO, proposing to coordinate national laws with respect to the deposit of microorganisms. Section 34(2) provides maximum flexibility for Canada by leaving the designation of depositories to be fixed by regulation.

Section 34(2) requires deposit by the date of publication in order to assure that persons interested in evaluating the invention experimentally or protesting grant of the patent will have an opportunity to obtain access to the microorganism and investigate the applicant's invention.

5.2 Disclosure Requirements on Grant -- s 34(3)

Section 34(3) deals with the disclosure portion of patent specifications at the time that patents are granted.

By the time of allowance of an application several years will likely have passed from the applicant's original priority date and the applicant will likely have a better understanding of the commercial importance of his invention. Section 34(3) establishes a relatively high standard for the disclosure at this stage.

Subsection 34(3)a refers to the principle of an invention or the technical effect it achieves. Present s 36 requires an applicant to describe the principle of any machine that he wishes to patent. This requirement is enlarged to apply to all categories of invention. The introduction of reference to "technical effect" as an alternative accommodates cases where the principle is not understood and allows the applicant to describe his invention in functional terms. In either case, such an analysis may constitute the best means for expressing the nature of an invention.

While s 34(3)a refers to the functional characteristics of an invention, s 34(3)b and c refer to the mechanical means or methods for exploiting the invention. Subsection b, referring to "best mode", reflects the requirement of present s 36 that the best mode of operating any machine must be disclosed. Under s 34(3)b this obligation is enlarged to apply to all inventions and, in particular where several advantageous uses of the invention are known, all such uses are to be disclosed.

Subsection 34(3)c expands the requirement of s 34(3)b by specifically requiring the description of one or more preferred embodiments. The requirement for reference to a preferred embodiment exists under the rules of the present law, but under the proposed law the description of a preferred embodiment is intended to demonstrate the invention. That description is not intended to limit the scope of the claims and it need not constitute one of the best modes referred to in s 34(3)b.

By generalizing on the functional rôle of the elements in the preferred embodiments, the applicant will be able to provide support for claims extending to the use of his invention in any form.

The concluding portions of s 34(3) adopt in explicit terms the further requirements for prior disclosure of an invention, as established under existing law. Unlike present s 55(1), ss 34(3)d and e are absolute standards, not dependent on the intention or purpose of the applicant. These provisions are reflected in the judgment of President Thorson in the Minerals Separation case.

Section 34(3) is, in summary, a composite of the wording of the present act, the Ilesley Commission's recommendations and the principles of jurisprudence developed generally, in Canada, the United States and under UK law. A Canadian application prepared to meet the standards of disclosure of s 34(3) would be likely to receive acceptance as sufficient to obtain a patent anywhere in the world.

5.3 Defining the Scope of Monopoly -- s 34(4)

Besides disclosing his invention for the purposes of sharing the knowledge that he has to offer, an applicant is also required to provide the means for determining the scope of monopoly to which he is entitled. The definition of the scope of protection to be accorded to a patentee is difficult and complex. Section 34(4) sets out these requirements as a separate matter from the requirements respecting disclosure.

Subsection 34(4)a makes it clear that the applicant is responsible to state expressly the generalizations inferable from his preferred embodiments which constitute the distinguishing characteristics of his invention. It is not enough for the applicant to describe his embodiment as a 'pile of parts' and then leave it for future

litigation to determine precisely where the invention resides. Although there may have been some misunderstanding of this principle, s 36(1) of the present act clearly states that an applicant is expected to indicate in his disclosure the part of this embodiment which constitutes his invention and then, subsequently, to define the scope of his monopoly with the technical wording of his claims*.

The challenge set for an applicant under s 34(4)a is to understand what it is that characterizes his own invention and makes it different from the prior art. The applicant is relieved from responsibility to distinguish his invention over unknown related prior art. But with respect to art of which he is aware, an applicant is required to distinguish his invention not simply in terms of differences in structure (which may be inconsequential), but to explain how his invention is functionally different. This provision continues the policy of the present Canadian law (which differs from UK requirements) in requiring a patent applicant to indicate in which aspects his specification describes something new. (cf Fox, "Canadian Patent Law" 4th ed, p 176.)

Subsection 34(4)b requires the inclusion of claims in the specification. Since this subsection forms part of the objects under s 34, the exact structure of such claims will be governed by regulation.

Claims will no longer define the "invention". As indicated under s 34(3)b, claims cover the scope of activities over which the patentee has power to limit access. Subsection 34(4)b is worded to allow regulations to approve any format of claim which characterizes the products or processes which are subject to the patentee's monopoly.

Subsection 34(4)b(ii) adopts the standard 'rule of thumb' developed over time for determining whether the patentee is attempting to claim more than he is entitled to claim. Under this method of establishing the scope of the patentee's rights, a claim is invalid if through lack of some qualification it defines or 'reads on' something forming part of the prior art. The stipulation in subsection 34(4)b(i) is equivalent to the present requirement that the disclosure must support the invention as claimed in the claim.

6 Abstracts -- s 35

Statutory reference is made to the provision of abstracts under s 35 in order to ensure that the concluding sentence of this provision is given full effect by the courts. Since abstracts, when properly drafted, should be easily readable and understandable, it may be necessary for patent applicants to depart from the precise wording of their claims. Such a departure should not prejudice rights under the patent.

* cf Pengo Hydra-Pull of Canada Ltd v Leithiser (1973) FC 405.

7 Provision of Evidence, Models and Samples -- s 36

This section replaces and amplifies the provisions of present s 40. Models are not customarily required under the present law, but the power to request models is convenient, particularly in cases where an applicant wishes to patent a device alleged to operate as a perpetual motion machine. More significantly, s 36 will allow the Commissioner to demand evidence to substantiate that an invention is operable. Such a power is consistent with the maintenance of high quality disclosures, ensuring that patent applicants make the fullest possible contribution in return for grant of a patent. The requirement of operability or utility, as it is now called under the present law, is subsumed in the proposed law in the expression "susceptible of industrial application" (s 11).

The reference in s 36(1) to the Commissioner acting on the application of any person anticipates subsequent provisions (s 43) permitting members of the public to intervene and oppose grant of patent, allowing such persons to raise the issues of utility and operability

8 Liability for False Disclosure -- s 37

This is a novel provision. It is introduced in order to motivate patent applicants to maintain the highest standard of disclosure in their applications.

Under the present law a policy has developed in the courts for denying rights for inoperative inventions by the technical mechanism of invalidating any claims which apply to or read on inoperative devices*. This ground for invalidating claims is removed by the provisions of s 72(2) of the proposed law. Instead, s 37 will provide a better incentive for applicants and patentees to ensure that inaccuracies in patent disclosures are corrected with due dispatch.

The liability created under s 37 is qualified by the limitation period of s 37(3) and particularly by provisions of s 37(5).

The stipulation in s 37(1) that persons acquiring a patent or claiming under an application will incur liability as well, is intended to encourage assignees to examine the disclosures of patent which they are acquiring. Through such examinations, patentees will receive independent criticism on the adequacy of the disclosures in their patents. Under the provisions of s 38, they will then be entitled to make whatever amendments are necessary to correct such deficiencies.

* cf Mineral Separations North American Corporation v Noranda Mines Ltd, (1952) 69 RPC 81; Traver Investments Inc. v Union Carbide, (1967) SCR 196

Provisions allowing amendments to applications and patents are necessarily very technical. On the one hand, there is always a danger that the unfair advantage of an unjustified early priority date will be obtained by an applicant where necessary features of an invention are only identified and introduced into an application at a later date. On the other hand, through accidental omissions at the time of drafting of an application, features may be omitted from the description of an invention or its application, or experience may generate further information which, while not essential as steps necessary to complete the invention, are useful or desirable information for exploiting an invention. Section 38 has been prepared on the basis that it is in the public interest that a patentee be encouraged to come forward at any time during the pendency of his application or the life of his patent to provide the public with the best information he has respecting use of his invention.

Section 38(1) allows an applicant to introduce anything he wishes into a patent disclosure, so long as it relates to the invention. This provision will replace the limitation found in the present rules that amendments are only permitted where they describe matter shown in the drawings or reasonably to be inferred from the specification as originally filed (rule 52). It will also replace in part the provisions of present s 50 which allows an applicant to obtain a reissue of his patent where it is "deemed defective or inoperative by reason of insufficient description or specification..". Unlike present s 50, proposed s 38 has no time limitation, nor is it qualified by the requirement that an error must have arisen from inadvertence, accident or mistake and without any fraudulent or deceptive intention.

While s 38(1) refers to amendment of the disclosure, apart from the claims, ss 38(3) to (6) deal with the more crucial issue of amendments to the scope of monopoly granted. Section 38(4) allows an applicant to narrow the scope of a claim at any time. This provision replaces the right to disclaim existing under s 51 of the present act. It is not, however, restricted by a requirement that only deletion of claims in their entirety will be allowed. Instead, claims can be narrowed by adding further qualifications as essential characteristics of embodiments of the invention, as long as the requirements of ss 38(5) and (6) are met.

The right to amend a claim to broaden the scope of monopoly is accorded under s 38(3), but only during a period following the priority date to be defined under regulations. It is contemplated that applicants should be entitled to amend their claims even after publication, in recognition of the fact that it may only become apparent after publication and perhaps after an intervention has arisen, that a claim fails to cover fully the territory which an applicant is entitled to claim. While the prescribed period under s 38(3) could even extend to any period prior to grant, some lesser date would probably be appropriate. In some cases, intervention

by interested parties may not occur if, through disclosure of their existence, a patent applicant may amend his claims to cover ground that otherwise would have been neglected. The fairest period under s 38(3) would probably be one during which proceedings respecting corresponding foreign applications before other patent offices will have given the Canadian applicant an opportunity both to learn more about the prior art and then to reconsider the real nature of the invention upon which he wishes to base his claims.

Both ss 38(3) and (4) are qualified by reference to the requirements of ss 38(5) and (6). Section 38(5)a reflects the requirements for claims established under s 34(4)b(i) and merely admits the broadening of a claim to the scope that could have been obtained on the basis of the disclosure originally filed. Section 38(5)b deals with the difficult case of a claim which is being broadened on the basis of new matter introduced into the disclosure. An attempt is made through the employment of the technical expression "conform" both to provide for such amendments and to establish a limit to such amendments.

Section 38(6) contains a key provision under subsection (c) that a broadened claim cannot be based on disclosures requiring further inventive steps. This is a very generous provision. It will allow applicants to introduce any information of the type that would be discoverable by a workman skilled in the art. While evaluation of amendments on the basis of this criterion may prove difficult and challenging for the Patent Office, it is, nevertheless, the type of evaluation that must be made for all applications disclosing inventions which may or may not involve an inventive step (as defined under s 12) over the prior art.

Subsections 38(6)a and b ensure that amendments will be relevant to the subject matter of the patent. They are also an invitation to applicants to make amendments which further demonstrate or explain their invention.

10 Amendment to Designation of Inventors -- s 39

As discussed earlier with respect to s 32, misnaming of inventors will not be fatal to the validity of a patent. As long as some person has a legitimate interest in the existence of a patent, it is more equitable to allow amendment to maintain its validity than to invalidate the patent provided that the interests of potential users of the invention are protected. Provisions protecting such persons in the course of legal proceedings are included under ss 39A and 76.

Sections 39(1) and (2) contemplate that changes in the designation of inventors will proceed on the basis of the consent of all known interested parties. Section 39(3) makes provision for disputes

where a person refuses to have his name removed from an issued patent as inventor or where coinventors refuse without just cause to have an additional person added. Section 39(3) assures that persons interested in upholding the validity of a patent will have the means to correct the designation of inventorship by obtaining the consent of the court.

11 Amendment after Revocation Proceedings are Commenced -- s 39A

Section 39A covers the case in which a patentee attempts to make amendments, either under ss 38 or 39, after proceedings have commenced in the Federal Court for revocation of a patent. Until amendments are entered under those sections, a patent will be challengeable for being defective. The effect of this stipulation is that patentees will be motivated to amend voluntarily their specifications at an early date.

Where a member of the public has taken steps to challenge the validity of a patent on the basis of a defect in the specification or designation of inventors, s 39A(1) stays proceedings before the Patent Office. Section 39A(2) stipulates the procedure that the Commissioner shall follow where the court, in the course of the revocation proceedings, entertains proposed amendments tendered by the patentee. The procedure of advertising the fact of such advertisements through the Patent Office is intended to give other persons an opportunity, both to comment by written submissions, and also to join in the revocation proceedings and thereby share in the privileges available under s 76. Section 39A(4) recognizes that, for at least the initial proceedings before the Patent Office, such a member of the public may wish to remain anonymous. Such anonymity will be respected since it will encourage the submission of comments to the Commissioner.

12 Division of an Application -- s 39B

The present law stipulates under s 38 that a patent shall be granted for one invention only. This is largely a matter of administrative convenience, since it permits patents to be classified under unique categories. Requirements for division of applications describing several inventions can lead to delay in the grant of patents. This is particularly embarrassing for patentees where the term of monopoly runs from the fixed priority date.

Section 39B(1) relieves some of the strictures of the present law. Further, s 39B(3), which authorizes the Commissioner to order division is permissive. This discretionary element applies both in the case where division may be instigated by the Patent Office and where the applicant requests division.

The reference to a claim to multiple priority dates under s 39B(3) arises by reason of the requirements of article 4 of the Paris Convention. That article requires Canada to recognize claims to multiple priority dates. To a great extent, such claims may be unnecessary in view of the generous amendment provisions of s 38. Where, however, through reference to a later priority date a foreign applicant attempts to introduce claims based on disclosure which qualifies as being inventively different from the original disclosure, s 39B(3) gives the applicant the option of requesting division. The period within which such a request must be made will be established by regulation. In any event, s 39B(4) ensures that such request will occur no later than the date of request for grant of a patent based on the earlier application.

Section 39B(5) confirms that where disclosures from a multitude of priority applications fall within the limits of s 38(6)c, they may all be incorporated in one application bearing the priority date of the earliest application.

This chapter sets out the activities that will take place before the Patent Office once an application has been filed. It defines the responsibilities of the Patent Office and establishes the procedural obligations of patent applicants.

1 Publication of Patent Applications -- s 40

The proposed law adopts a policy of early publication of patent applications. At present, the following countries publish applications irrespective of whether the examination process is complete:

Australia, Brasil, France, Federal Republic of Germany, Netherlands, Nordic countries (Denmark, Finland, Norway, Sweden)-- (UNCTAD Report para 67).

This policy has also been adopted under the EPT; it will become part of the UK patent law (according to the White Paper, Consultative Document p 8 para 24); it was recommended by the US President's Commission (p 16) and was proposed in the US Senate Bill S-2504 (s 122). The Ilsley Commission recommended publication of applications twelve months after the filing of the complete specification in Canada (p 46). The Economic Council also approved of early publication, referring to a period of twelve months from the filing of the complete specification (p 88).

Early publication of applications can therefore be accepted as a conventional proposal. The contentious issue which remains is the time at which publication is to occur. Free from other considerations, it would be desirable for applications to be published at the earliest possible date in order to give the public and interested parties the benefits of knowledge of the invention. This would be true even if the only purpose of early publication were to give the public an opportunity to avoid infringement.

The time at which applications shall be published under s 40 has been left to be prescribed by regulation. Use of the regulation provision will allow flexibility within the law. For instance, if a decision is made that, for administrative convenience, Canada should join the Patent Cooperation Treaty, then the prescribed period could be set at 18 months, the period required by the treaty. Otherwise, an earlier date of publication can be adopted. In any event a delay of more than 18 months would be both undesirable and unnecessary, as this is the period set under EPT.

Section 40(1) allows an applicant to request early publication of his application. Such publication may be to an applicant's advantage. Interim rights under s 23(1)a do not begin until an application has

been published. The possibility of intervening rights arising through independent commercial use of the invention can, under s 50(1)b be forestalled by publication under s 40(1). Therefore, early voluntary publication is actually encouraged under the proposed law and s 40(1) gives an applicant the option of electing for early publication.

Section 40(1) establishes that publication occurs when an application is laid open for inspection by the public. Regulations may also provide for publication through distribution of printed copies of abstracts and drawings. However, since s 40(3) assures the public a right to obtain copies of documents laid open for inspection under s 40(2), applications can become technically "published" under the law without any administrative delay.

Section 40(4) provides for the immediate publication of 'tombstone data' pertaining to applications, as prescribed by regulation. The fact that an application corresponding to other foreign applications has been filed in Canada may be of considerable relevance to potential invention-users in Canada. The wording of s 40(4) follows the provisions of EPT article 149(6).

The concluding words of s 40(4) ensure that regulations may authorize the publication of all correspondence arising in the course of examination of an application. It is desirable that such correspondence be made available for public examination since, under s 43, members of the public will be entitled to oppose applications.

Section 40(5) allows an applicant to withdraw an application and thereby avoid publication. This provision will allow applicants filing before the Canadian Patent Office to take advantage of art 4C(4) of the Paris Convention. That article stipulates that where an applicant withdraws or abandons an application prior to its having been laid open to public inspection, the right to claim priority based on a subsequent application is preserved. The provisions of s 40(5) will allow Canadian applicants to enjoy the full benefit of the Canadian Patent Office as a depository for establishing a priority date for foreign filings.

2 Secrecy for Patent Applications -- s 41

Section 41 replaces the rather lengthy provisions of s 20 in the present act dealing with inventions which, for reasons of national security, should be kept secret. The procedure established under s 41 generally follows the recommendations made by the Ilsley Commission (part IV s 30 pp 54-57), with changes to improve clarity.

While some of the provisions of s 41 may be purely procedural, since they constitute an exception from the normal procedures established under the act and since they entail imposition of the obligation of secrecy on an applicant together with the sanctions of the Official Secret's Act, the entire procedure has been incorporated as part of the proposed statute.

The proposed law does not contain, as was recommended by Ilsley (part IV s 30(7) p 56), provisions requiring Canadian residents to file first for patent protection in Canada. Provisions of this nature exist under the present US law (US Code ss 181-188). The penalty under the US code for filing, without a licence from the Commissioner, a foreign application within six months from the US filing, is invalidation of US patent rights (US Code s 185).

The obligation to file first in Canada has not been included in the proposed law because such an obligation may, in some cases, constitute an undesired expense and unnecessary inconvenience for Canadian inventors. It cannot be justified on security grounds because no provision exists under Canadian law which would prevent an inventor from publishing his invention abroad, outside of the patent system. Further, no net benefits to Canada would likely flow from forcing Canadian inventors to file applications for Canadian patents.

Section 41(5) allows applications kept in secrecy to be prosecuted to allowance or rejection. This will enable the validity of such applications to be determined for purposes of establishing crown liability for use of an invention, under s 41(16). Section 41(19) allows the crown to challenge the validity of an application which has been allowed on the same basis as a patent.

The provisions of subsections 41(16) and (18) follow the Ilsley proposals in providing compensation and indemnity to applicants who are subject to a secrecy order under the provisions of s 41. Section 41(20), while not extending the term of patent rights available, will assure that applicants have an adequate opportunity to establish working of an invention in Canada before being subject to the effects of ss 27 and 53. Applicants would also have the privilege of abandoning and refiling applications which had been held in secrecy for an extended period of time as long as their invention has not been publically disclosed.

3 Examination of Applications

Preliminary to a detailed commentary on the actual wording proposed for the draft law respecting patent examination, the following section discusses some of the basic issues relating to examination.

3.1 Background --Object and Alternatives: Examination vs Registration

Canada has for many years, like most of the major industrial countries of the world, had a system of examination as a precondition to the grant of patents. This situation has existed for so long and has become so much a part of our law, that for many persons it would be difficult to conceive of any other alternative. However, there are alternatives to the present examination system and they should be carefully considered before concluding that examination as we know it should continue in the future.

Since the passing of the Statute of Monopolies, it has always been accepted that where a patent has issued for something which in fact was not new, that patent may be treated as being null and void, and may be so declared by a court. For over 200 years the patent system in the United Kingdom operated on the basis that patents were issued at the risk of the patentee, subject to the invalidation if subsequently found to lack novelty.

In 1883, a patent office was established in the UK to administer the granting of patents, and to examine applications as to form. It was not until 1903 that the British Patent Office began examining patents with respect to determining whether the described invention was in fact new. Even under the present UK patent law the Comptroller cannot on his own initiative prior to publication refuse an application for an invention on the grounds that it is obvious, and can do so in oppositions only where the invention is 'clearly' obvious (UK s 14(1)e).

The United States commenced its examination procedures in 1836 and today the United States Patent Office aspires to give every patent application a complete examination in order to ensure its validity. Unfortunately, perfection is not being achieved and on the order of fifty per cent of litigated patents in the United States are held invalid by the courts. On the other hand, less than 1% of all patents are ever actually involved in litigation before the US courts.*

Examination procedures have been in existence for some time in many of the countries of Europe including Germany, Austria, the Netherlands, the Scandinavian Countries, but with the notable exceptions of such other countries as Belgium, France, Italy, Greece, Spain and Portugal. These countries have generally followed the system for granting patents established under the French patent law of 1844**.

France was one of the first countries outside of England to formally introduce statutory provisions for the granting of patents of monopoly. This legislation was passed during the period of the French Revolution in 1792. However, the French patent system has never qualified as an 'examination' system in the fullest sense. A substantial change

* cf United States Patent Office statistics provided to Philip A. Hart, Chairman, the US Senate, Committee of the Judiciary, Subcommittee on Antitrust and Monopoly, and forming part of the record of the hearings of the Subcommittee on Patents, Trademarks and Copyrights, September 11, 12 and 14, 1973.

** cf Stephen P Ladas "Patents, Trademarks and Related Rights" (1975) p 344.

was introduced in 1969, the transition of which is not yet complete, but prior to that date, one had only to file an application with the appropriate disclosures in order to obtain a patent grant by registration. No examination for novelty is made under a registration system.

The theory behind the registration system is that since inevitably, even under an examination system, the validity of the patent would be examined in the course of litigation to enforce it, it is redundant and wasteful to bother investing public resources in a review of patents, a substantial percentage of which would never be litigated in any event.

The change that was introduced into the French law in 1969 was an attempt to go partway toward meeting the objections that the validity of an unexamined patent was so uncertain that it was of little use as an economic instrument to encourage investment in new manufacturing facilities. Under the 1969 provisions, every application is forwarded to the searching facilities maintained in The Hague, by the Institut Internationale de Brevets (IIB) and a search report among the world's patent art and major technical literature is prepared. Following the search, the results are forwarded to the applicant with whatever observations the examiner in the French Patent Office might care to make. It then remains for the applicant to decide on the final form that he wishes his application and ultimately his patent to take. Therefore, the examination is not complete in any sense normally understood in our system. No attempt is made by the French Patent Office to ensure that claims are not made to subject matter which is old and a mere obvious variation on what was already known.

Between these two extremes with respect to the processing of applications for the grant of patent rights there are two further alternate systems which share characteristics with both the full examination and the simple registration system.

3.2 Deferred Examination

One alternate system for processing patent application is that developed only recently, originating in Holland under the pressure of the mounting numbers of patent applications being filed. Deferred examination of patents was first introduced by the Dutch in 1963 in order to overcome the excessive number of outstanding applications*. At that time, the average period between application and grant of a patent in Holland was in excess of four years. The uncertainty inherent in this extended period was deleterious to the interests of some of the applicants and to local industry.

The system of deferred examination was adopted in recognition of the fact that not all applicants were interested in obtaining patents, at least not immediately. Many applications, it was presumed, were

* cf Ladas op cit p 368

filed by persons who were speculating on the future commercial value of their invention, or who filed more for the purpose of 'occupying ground' to prevent others from getting patents rather than with the object of obtaining exclusive privileges for their own benefit.

Under deferred examination, an application is not examined unless the applicant requests it. This deviates from the usual procedure by which applications are dealt with in the order in which they are received. Thus, persons anxious to have their application examined quickly would be able to get earlier attention under a deferred examination system. Also persons who, after a number of years have passed, conclude that their application is really of little value, are given the opportunity to withdraw from the application procedure without having incurred major cost.

The results in Holland have been impressive. In 1972, after having experienced eight years under the deferred examination system, over 40% of all applications were being abandoned after a maximum pendency of seven years.* There had been some increase in the number of applications and this may, in part, be attributable to the lower cost of filing under the deferred examination system. But, nevertheless from an economic viewpoint, a great deal of unnecessary time and energy in the examination of valueless applications is being saved.

Germany introduced a deferred examination system in 1968 and Japan 1971. Statistics from Japan analyzing the rate of requests for examination, made by selected companies, are set out in Table 10.

Since early publication necessarily is associated with deferred examination (it would be undesirable to defer publication for seven years as the patent system is supposed to encourage early disclosure of the advances being made in new technology) some provision for interim protection following publication is necessary. The tendency appears to be to grant to the patentee a right of compensation for use of the invention in the period following publication and on the condition that the patentee requests examination and obtains a patent thereon.

* cf Iadas op cit p 370.

Electric Machinery and Appliances	Patents Open to Public	Requests for Exam.	% Requests for Exam.	Patents Open to Public	Requests for Exam.	% Requests for Exam.
RCA Corp.	344	325	95	121	0	0
IBM Corp.	716	303	42	209	2	1
Western Electric Inc.	339	144	42	583	10	2
Westinghouse El. Co.	507	119	23	205	45	22
Sperry Rand Corp.	123	33	27	514	6	1
General Electric Co.	593	56	9	375	4	1
Xerox Corp.	231	0	0	341	30	9
Texas Instruments Inc.	102	1	0.9	824	2	0.2
NCR	113	33	29	101	1	1
The Bendix Corp.	284	23	8			
Siemens A.G.	1,023	95	9			
N.V. Philips, Gloeilam- penfabriken	855	1	0.1	88	0	0
Chemistry						
Upjohn Co.	99	0	0	104	82	79
American Cyanamid Co.	67	1	1	91	18	20
E.I. Du Pont de Ne- mours & Co.	364	33	9	183	79	43
Eastman Kodak Co.	336	0	0	0	1	2
Celanese Corp.	66	0	0			

Source: from a list of 32 Major Overseas Firms' Patent Applications included in an article entitled "New Trends of Technical Development for 100 Influential Firms, at Home and Abroad" by Kusuyata Shimamoto, Patents & Licensing, December 1973.

The net combination of deferred examination, early publication and interim protection is that members of the public are subject to a system similar in some respects to a registration system. The distinction between the deferred examination system and a registration system is that under deferred examination the initial validity of the patent is reviewed by a patent office, with or without the participation of the potential infringer. Under a registration system the first test of validity of a patent takes place before a court. Under deferred examination, if the patent office does grant the patent, then the infringer still has recourse to the courts to invalidate the patent.

Deferred examination can serve as a desirable procedure both from the viewpoint of government administration of the patent system and from the viewpoint of patent applicants and industry as well. Once provisions have been incorporated into the law for early publication of patent disclosures and for a right to compensation for use prior to grant, there is no real justification for examining for novelty applications which are not considered to be of immediate relevance. Where, however, either the applicant, a member of the public or the Patent Office itself becomes interested in determining whether an application is likely to support grant of a valid patent, examination can then proceed on request with provision for participation and contributions from interested parties. Under deferred examination, patentees may also have a better understanding of the value of their invention and may therefore be better able to defend their right to a patent. Industry has an opportunity to oppose grant of a patent prior to any presumption of validity arising. If for no other reason than that, by relieving the Patent Office of some of the burden of its workload, and examination of the more relevant applications may proceed more quickly, deferred examination is likely to be of benefit to all persons affected by the patent system.

Objections are sometimes raised against deferred examination on two grounds. The first is that it contributes to a proliferation of prior art documents that must be incorporated into the search process. The second is that uncertainty arises with respect to unexamined pending applications.

While patent literature is accumulating at an increasing rate around the world, as long as a patent must be tested for validity on the basis of prior art, this problem seems inevitable. The objection against the proliferation of documents is based on the administrative burden of carrying out searches. The search problem is, however, much larger than the issues relating to deferred examination. It will exist in any event. Further, while not lessening the scope of search, deferred examination can limit the number of searches required.

The second objection, based upon uncertainty, is an element present in any fact-finding system. There is a delay inherent in any legal evaluative process. The patent system as it presently exists, however, is unique in that it insists on an initial legal evaluation before any need to determine the issue arises. Under deferred examination, either the applicant or any interested member of the public can precipitate examination once interest in using the invention develops.

A further objection which might be raised to the deferred examination system is that by pressing an applicant with automatic examination, applications may be abandoned. Some of these abandoned applications may, in fact, be of commercial value. Persons may already secretly be infringing them. Alternately, the commercial potential of the invention might only become apparent after some further years. Under deferred examination, an applicant will be less likely to abandon prematurely the possibility of obtaining a patent for those inventions which may turn out to be commercially important. It is obviously in the interest of some nonpatenting industrial users to encourage a system which makes applicants' guess in the dark' and elect in a certain percentage of cases to abandon their rights.

With the fixed and relatively shortened term available to patentees under the proposed law, the possibility that deferred examination will extend the option of an applicant to obtaining a patent should be balanced against the benefits of improved examination and administration that deferred examinations imports.

3.3 Patents of Confirmation

The further alternate system for granting patents which relies neither on direct examination nor on simple registration is that in use in many of the overseas territories administered by Great Britain in the early part of the 20th century. Any person holding a British patent could have it registered or sealed with the local patent office and thereby obtain patent rights in that local jurisdiction. This system is still in force in such countries as Ghana, Kenya, Malaysia, Singapore, Tanzania, Tobago, Trinidad and Uganda.*

A similar type of patent **granting system** is maintained by some of the Latin American countries in which a local patent is granted by 'confirming' a foreign patent. These types of patents are generally called 'patents of importation' or 'patents of confirmation'. For the purposes of discussion, all patents of this type will be referred to as 'patents of confirmation'.

* cf Ladas op cit p 374.

This system of accepting, as a basis for grant of a local patent, a patent which has been granted in a foreign country, enjoys the advantages of the benefits of search and examination by that foreign country, without the expense of unnecessarily duplicating these procedures. Since the goal of absolute certainty cannot be obtained under any examination system operated in the world today, the confirmation method of patent grant at least avoids the likelihood of the most feared abuse of a registration system, -- a non bona fide reckless claim to patent rights.

3.4 Australian System

A system similar in part to the granting of patents of confirmation has recently been adopted in Australia.*

Faced with an increasing backlog of unexamined patent applications, the Australian government introduced two major procedural modifications into the Australian patent law in 1969. Effective January 1, 1970, applicants could request deferral of examination for a period of five years. As an alternative, an applicant could request 'modified examination'. The Australian system of modified examination deserves special consideration, since it may be particularly suitable to Canada's situation.

Under the Australian system requests for modified examination may only be made where a patent has been granted in a prescribed country for a convention application. Modified examination is not available for convention applications originating in Australia. At present the United States and the United Kingdom are the only countries prescribed under these provisions.

Upon electing for modified examination, the Australian specification must be brought into conformity with the granted foreign patent, not only as to disclosure, but also in the form and wording of the claim. In doing so, an applicant may end up with narrower claims than he might otherwise have been able to obtain by submitting to a full examination under the standards of Australian Law.

The application is still subject to examination, but the scope of search established by regulations is limited. Regulations have, to date, empowered examiners to disregard prior applications and publications which arose more than three years earlier than the pending application's priority date.** This three-year period allows the Australian examiner to search for copending, conflicting applications with an earlier priority date and for technical references which may not have become published in time to come to the attention of the foreign examining authority.

* Australian Patent Act (1969), s 14, introducing ss 52A-E

** Regulation 19B under the Australian Patent Act.

The Australian modified examination system may appear on first view to be an extension of rule 39 of the present Canadian patent act. Rule 39 allows Examiners to require applicants to disclose prior art cited during examination of corresponding applications before foreign patent offices. However, examiners are still responsible to review all relevant prior art and apply such art against pending applications. This is a more complex and time-consuming procedure than that contemplated under the Australian system.

In the June 11, 1974 issue of the Canadian Patent Office Record, interested members of the Canadian public were invited to submit comments on a series of proposals respecting examination of Canadian patent applications. The third of these proposals was that the Patent Office should accept the results arising from examination of designated corresponding foreign applications as sufficient for Canadian purposes. The response received to these proposals is summarized in the report included as appendix G to this working paper.

3.5 Examination-- Conclusion: Provisions of the Proposed Law

Of the various types of systems reviewed above, some form of examination is clearly desirable. A pure registration system is undesirable since uncertainty as to validity defeats the very purpose of granting patents. Such patents are not likely to serve as an effective incentive for entrepreneurs to invest in the commercial exploitation of new technology.

The introduction of deferred examination would clearly improve the present examination system. The present system is expensive and results in redundant effort by Canadian Patent Office examiners, either on account of the fact that applications being examined may never be of interest to the patentees if granted patents, or because corresponding applications had already been previously examined and amended in foreign examination jurisdictions. A sample survey in the Canadian Patent Office in 1974 showed that 38% of applications pending in Canada are amended to conform with US or other foreign-allowed applications. Provisions for adoption of deferred examination have accordingly been incorporated into the proposed law.

Provision has also been made for the possibility that Canada may sometime in the future be able to dispense with examination for a large portion of applications of foreign origin, and rely instead on examination results in selected foreign jurisdictions.

The structure of the proposed law in respect to patentability is largely parallel to the provisions of the European Patent Treaty (EPT). Thus EPT applications, when examined, will be subjected to the same standards as would be applied under the proposed law. Once the EPT is in full force and has proven that it is working successfully a reevaluation of the need for duplicative examination of such applications in Canada can be made.

It is with the background discussion in mind that the actual provisions proposed for governing the examination process should be read.

3.6 Examination of Applications -- s 42

Pursuant to the discussion in the preceding passages, the statutory provisions respecting examination of patents under the proposed law are intended to provide for maximum flexibility in the future. Section 42 establishes the basic principle that generally some form of examination should take place as a condition precedent to the granting of patents. However, the precise nature of this examination is left to either the jurisdiction of the Commissioner, or to regulations. In a field as exceptionally technical as that of patents, it is appropriate that details of the examination procedure not be subject to rigid statutory constraints. It is not anticipated that changes will be made continuously in the examination system but significant changes in examination procedure should preferably be implemented by changes in the regulations after an appropriate opportunity for public discussion.

Section 42(4) provides statutory authority for regulations governing the scope of examination or for acceptance of applications on the basis of the results of foreign examination proceedings. Subsection 42(4)e gives statutory authority for provisions of the type now existing under rule 39, enabling the Patent Office to request information possessed by the applicant pertaining to the nature and use of the invention, the state of the art and other information known to the applicant. This will place the Patent Office on an equal footing with the applicant in the examination process.

Section 42(2) establishes the burden in patent application proceedings. Rather than resolving uncertainties in favor of applicants, patent rights will only be granted where the applicant's entitlement to a patent has been established. This is a departure from the provision of present s 42 and corresponds to s 191 of the US Bill S-2504.

Section 42(5) gives statutory authority for refusing applications where applicants fail to comply with regulations governing the examination procedures.

4. Intervention to Oppose Grant of Patents -- s 43

This section contains an enlarged version of the present procedure carried out when persons protest against the issuance of a patent during prosecution. Notwithstanding that Canadian patent applications are at present unpublished, protests are sometimes received and, pursuant to rule 15 and the Manual of Patent Office Practice, their receipt is acknowledged and they are applied against applications if relevant. Section 43 of the proposed law gives a statutory right to

any interested person to participate directly in the examination process. This will assist the Patent Office in its analysis of applications. Section 43 codifies the informal procedure now in effect, and corresponds to EPT article 115.

Section 43(2) contemplates that the procedure shall take place on the basis of written submissions. The intention is to avoid formal opposition hearings, discovery proceedings and other procedures which contribute to prolonging the examination process and adding unduly to its cost. Generally it is anticipated that protests under s 43 will be limited to the submission of published references of prior art. Nevertheless, issues as to prior use may arise. Section 43(3) recognizes this possibility, reserving the procedure to be followed to be governed by regulations. The Commissioner has been named to carry this fact-finding exercise to avoid the delay of a reference to the Federal Court at this stage. Any intervenor who is dissatisfied with a Commissioner's fact-finding decision will be entitled to relitigate the issue before the federal courts by way of impeachment proceedings, pursuant to chapter 7 of the proposed law.

In order to encourage intervention by members of the public, s 43(4) ensures intervenors a right of anonymity. Under s 43(2) applicants are entitled to review and respond to objections raised by intervenors. The extent to which this exchange will continue is thereafter subject to the discretion of the Commissioner pursuant s 43(5). Section 43(6) is intended to prevent unilateral representations by one party to which the other party will have no opportunity to respond.

There is presently no requirement that reasons for allowance be prepared when a patent application is allowed. Section 43(7) will enable an intervenor to obtain a reasoned evaluation of his submissions and of the basis upon which the patent application is allowed. This provision is intended to make the intervention proceeding attractive by providing the public with a studied third party opinion as to the validity of patents at an early stage.

Under s 43(7) the Commissioner is only required to supply written reasons on request. This follows the procedures established under the Ontario Statutory Powers Procedures Act, SO, 1971 c 47 s 17.

As a further feature to encourage participation in the intervention procedure, s 43(8) gives applicants a privileged position in any of subsequent revocation actions. A deadline for the commencement of such actions is prescribed, combined with suspension of the usual presumption of validity of s 43(9), to give intervenors a right similar to an appeal. Subsequent provisions preserving the possibility for an intervenor to acquire intervening rights has also been included to encourage public participation in the intervention process (s 51(2)).

5. Allowance and Refusal of Applications -- s 44

Sections 44(1) - (4) establish the procedure by which a patent is granted after allowance. The purpose of the notification procedure is to give applicants one last chance to make final amendments to

their patent specifications and claims prior to grant. Section 44(5) gives the statutory authority for refusal of an application.

6. Review of the Refusal of an Application -- s 45

Section 45(1) will permit the Commissioner to establish a procedure similar to that presently operating within the Patent Office using officials from the examination staff to constitute an advisory board. The procedure followed reserves to the Commissioner the final decision whether an application should be refused. Section 45(1) goes beyond the present practice, however, by admitting participation by persons from outside of the Patent Office as part of the advisory board if such assistance should prove desirable.

Under s 45(3) the burden established under s 42(2) is applied against the applicant. The Commissioner is required to reject an application unless "satisfied that the applicant is entitled to a patent". Provision is given for the Commissioner to direct reconsideration by the board if he wishes them to consider a variation on their initial ruling.

Again, with respect to s 43(7) the Commissioner is required to produce written reasons for a refusal if requested. A right of appeal is established under s 45(5). An applicant is granted an express right of appeal under this last provision rather than the review procedure available under the Federal Court Act, to ensure that he has a full opportunity to finally establish his rights to a patent under the act.

Section 28 of the Federal Court Act would give applicants, in the absence of an express right of appeal, the right to have the decision of the Commissioner reviewed on the grounds that, acting as a tribunal, he:

"(a) failed to observe a principle of natural justice or otherwise acted beyond or refused to exercise (his) jurisdiction;

(b) made an error in law making (his) decision or order, whether or not the error appears on the face of the record; or

(c) made (his) decision or order on a erroneous finding of fact that (he) made in a perverse or capricious manner or without regard to the material before (him)."

While almost amounting to an appeal, the review under s 28 does not permit the court to apply its own conclusion on issues of fact. In this respect, the recommended appeal procedure is broader.

Section 45(6) gives the Commissioner statutory authority to follow an applicant in his appeal in order to obtain a collateral ruling from the court on questions of law which might not otherwise be clarified. At present, appeals to the Federal Court are confined to the issue of whether or not an applicant is entitled to a patent. Section 45(6) will enable the Commissioner to take advantage of court

proceedings to obtain definitive rulings on related issues of concern to the Patent Office where such matters would otherwise not be considered.

7 Validity of Patents -- s 46

This section establishes the presumption that every patent, once issued, is valid until revoked. This presumption of validity only has meaning when completed by the standard of burden of proof necessary to revoke the patent. These are discussed subsequently (ss 74 and 75). In order for the patent to have value as an economic instrument in the hands of an entrepreneur, it must be given some degree of status respecting validity. As a test, one might hypothesize an attempt to use the patent as collateral or security for a loan. Its value under such circumstances is proportional not only to the worth of the invention, but also to the prospects that the patent may or may not, in the future, be subject to revocation. Section 46 is the first part of several provisions designed to improve the presumption of validity associated with a patent.

3 Review of Patentability After Grant -- s 47

This section is a new proposal for Canadian patent law. The intention is to provide the public with a forum for a nonbinding arbitration ruling on the validity of patents after grant. It applies only with respect to newly discovered art. In licensing negotiations or in settlement negotiations respecting infringement, such art is likely to turn up as a result of extensive searches arising from such proceedings. Once such art is found, the patent is equivalent to an unexamined application. Uncertainty as to its validity may have serious effect on negotiations of the type described.

By using the expertise of the Patent Office to interpret the relevance of any newly discovered prior art, a patentee and a potential licensee-infringer will be able to obtain an independent opinion on the validity of the patent. They will be able to do so without resorting to either lawyers or the courts. The nonbinding opinion of the Patent Office, coming from the neutral third party, can therefore serve as a basis for voluntary settlement avoiding formal legal proceedings.

A similar arrangement has existed with respect to the Tax Appeal Board under the Income Tax Act (RSC 1970 c I-5 s 66). An initial hearing may be held either before the board or before the Federal Court. If the board's opinion is not considered acceptable, then the matter is reheard before the Federal Court as a trial de novo.

The UK Patents Act contains a provision for the comptroller to hold full-scale infringement proceedings when all parties consent (s 67).

This provision has been little used -- 73 cases in ten years -- and the Banks committee recommended that the section be repealed (para 268, p 76). Section 47 differs from the UK provisions in that the Commissioner does not rule on infringement. Rather, he only advises

on validity. Further, such advice may be obtained upon the application of any interested party, whether or not the other parties involved consent.

Section 47(2) is intended to encourage use of the intervention procedure available under s 43. It is preferable for the Patent Office to be advised at the earliest possible date of relevant prior art in order that it be able to carry out the best possible examination.

The procedures under ss 47(3)-(6) are similar to those described with respect to s 43. The decision of the Commissioner under s 47(7) is in the form of an opinion and does not affect the legal validity of a patent. In some respect, this opinion may carry the same weight as the comments of examiners under the new French Patent Law adopted in 1969 (supra p 229). It is for this purpose that s 47(8) stipulates that the Commissioner's opinion shall form part of the public record in the Patent Office.

Section 47(9) and (10) are intended to prevent a patentee from moving to amend his application when informed of a defect in his patent in the course of negotiations with a licensee or infringer. While patentees will have the right under the proposed law to correct deficiencies in their patents (supra p 221), this right will not be allowed to prejudice persons who may be considering challenging the patent and have taken steps under the procedures of s 47. Subsections 47(9) and (10) give such applicants special status to commence revocation proceedings on the basis of the unamended patent. They will then be entitled to the special consideration and privileges available under subsequent provisions if the patentee requests an amendment (s 76).

Section 47(11) allows the provisions of s 47 to be suspended or reinstated by order in council. Since s 47 is in the nature of a service to the public, subsection 47(11) will allow suspension of that service where, for administrative convenience or other reasons such a step is considered desirable.

CHAPTER 5 - QUALIFICATIONS ON PATENT RIGHTS

This chapter deals with limitations on the rights of a patentee which arise by reason of events beyond the patentee's control and are not inherent in the nature of an invention or the patent grant.

1 Intervening Rights -- ss 50-52

Section 50 establishes a privilege of continuing use for persons who independently commence to apply an invention. Similar rights are found in the patent laws of many countries around the world and are reflected in CMC art 34. The Canadian law contains in present s 58 a provision of a similar nature which, however, has features not found in other laws.

1.1 Present Section 58

Section 58 provides that any person who has acquired any invention prior to the grant of a patent is entitled to continue to use and dispose of the specific article so acquired notwithstanding the subsequent grant of the patent. Recent decisions have suggested that this section extends to permit continued use of a process after a patent has issued.*

Provisions to the effect of present s 58 have been part of Canadian law since before confederation (cf 1849 Statutes of the Province of Canada c 24, s 12). Commentators have suggested that this provision was derived from the US act of 1839.** But the Canadian and US provisions diverged, commencing with the first Canadian patent statute, passed in 1869. (Statutes of Canada c 11, s 48). In that statute, the Canadian provision was enlarged to protect a person who had acquired any art, machine, manufacture or composition prior to the grant of a patent. Previously, this privilege expired upon filing an application.

In 1870 the US provision, continuing its reference to the application date, incorporated a further proviso. Thereafter under US law only acquisition with the knowledge and consent of the inventor was privileged. This type of condition has never been part of Canadian law.

* Libbey-Owens-Ford Glass Co. v Ford Motor Co. of Canada Ltd (1969) 1 Ex CR 529; (1970) SCR 833; Peterson Electronic Die Co. Inc. v Plastiseal Inc, March 29 (1974) 14 CPR (2d) 48.

** cf James Fogo - "The Imperfect Monopoly" (1962) 38 CPR 147.

A theory for maintenance of the privilege afforded by present s 58 was reviewed by James Fogo in the above-mentioned article as follows (p 149):*

"The right to use any article, process or composition of matter is a natural right in all persons independent of patent protection. The State, by legislation, gives to the patentee an added right in exchange for teaching the nation - an exclusive right - the right to exclude others from manufacture, sale and use of the invention. The words "exclusive" and "exclude" stem from the Latin "excludere" - to lock out. But you can lock out only those who are not already inside when the fence is erected. Thus those already practising the invention at the critical date are not excluded."

This argument received judicial acknowledgement in the Libbey-Owens-Ford decision which rules that present s 58 extends to protect persons who acquire a process invention prior to the grant of a patent.

The extension of present s 58 to include process inventions, coupled with the fact that privileged use of an invention can be established at any time up until grant of a patent, makes continuation of this provision in its present form under the proposed law inappropriate. This is particularly so because the Canadian section is not qualified to prevent persons from adopting an invention based on knowledge acquired or originating from the patentee. Nevertheless, the proposed law continues part of the policy inherent in the present provisions.

1.2 Proposed Law -- s 50

The policy pursued in the proposed law is that persons who proceed independently to invest in the exploitation of an invention before they have any means of knowing that they may infringe another's rights should not be prejudiced by the fact that a patent is subsequently granted to another person. Section 50 of the proposed law allows that any person who, before publication or public use of an invention takes steps to work the invention in Canada, will acquire by way of an intervening right the privilege of continuing to exploit the invention, notwithstanding the subsequent grant of a patent to someone else.

* Based on an earlier article by G. Benjamin, "The Right of Prior User" 26 JPOS 329.

Intervening rights as established under s 50 will protect persons who invest in the exploitation of new technology. In answer to the objection that such rights will reduce the value of some patents, intervening rights will only arise in cases where innovation is proceeding without reliance on any contribution of the patentee. Since innovation is a major object of the proposed law (s 3(1)c), a limitation of the benefits conferred on patentees in such cases is justified. This same policy was applied in respect of prior secret commercial use by an applicant (s 15).

This exception to the exclusivity of a patentee's rights will arise only in very narrow circumstances. Under s 50(1), only persons who commence to work the invention in Canada by manufacturing are protected, rather than persons who are importing goods into Canada. Further, only steps taken in Canada are recognized. Thus the section limits the exception created to cases where an investment would otherwise be prejudiced by the imposition of patent restraints. Persons who commence to manufacture abroad do not, of necessity, require access to the Canadian market to the extent that persons manufacturing in Canada do. The rationale applied here is similar to the policy of establishing only such rights for patents as are economically effective, a policy developed above with respect to s 24(1) e-g.

On the same basis, the intervening right established under s 50 (2)a does not recognize a privilege to import. The acquisition of rights is further limited by s 50(4) to ensure that only those persons who innocently acquire the invention will be protected.

Section 50(3) deals with the difficult problem of the scope of the intervening right. Rather than attempt to limit the intervening right to continuing use at a fixed level or in a limited manner, s 50(3) makes the right, once acquired, as broad as the scope of the patent. This is consistent with earlier provisions limiting each patent to apply to a single general inventive concept (s 39B (1)).

The adoption in s 50(1) of publication as the determining event for terminating the prospect of establishing intervening rights was proposed by the Ilsley Commission (part XI s 4 p 106) and is consistent with the general encouragement of early disclosure of new inventions. This is a major object of the proposed law (s 3(1)e). Under s 40, applicants have the option of requesting immediate publication of their disclosures, without waiting for the prescribed period for automatic disclosure to pass. It will therefore be within the power of each patent applicant to determine the date which will foreclose the subsequent acquisition of intervening rights by others.

To prevent the acquisition of intervening rights in Canada a patent applicant will have the alternative of disclosing the invention outside the patent system in a manner which makes it available as public knowledge either by publication (under s 50(1)b) or by commercial use in Canada (s 50(1)c). This is consistent with the effect of present s 58 whereby the grant of a patent, accompanied by publication, terminates the opportunity to acquire a privileged status. Section 50(1)b permits regulations to designate special publications which may be used by patentees, such as publication by the International Bureau under PCT (article 21) or publication by the US or EPT patent offices.

The effect of s 50 will be to ensure that Canadian industry will be able to confidently proceed with decisions to adopt new technology as long as there has not been previous disclosure. Once a disclosure of new technology has been made by others, however, industry will then have been put on notice as to the possibility of future patent restraints. Put alternately, publication or commercial use under s 50(1) will foreclose any arguments that an invention has been acquired innocently, independently of the patentee.

1.3 Relevance of the Paris Convention

Some may question whether the proposed law complies with the requirements of article 4B of the Paris convention. That article provides, inter alia:

4B "...the subsequent filing in any of the other countries of the Union before the expiration... (the convention year) shall not be invalidated through any acts accomplished in the interval as, for instance, by another filing, by publication or exploitation of the invention, ... and these acts cannot give rise to any right of third parties, or of any personal possession. Rights acquired by third parties before the date of the first application which serves as the basis for the right of priority are reserved under the domestic legislation of each country of the Union."

Read strictly, the statement that "these acts (including exploitation of the invention) cannot give rise to any right of third parties" would appear to apply against proposed s 50.

One of the benefits of establishing a priority period under the convention was to ensure that applicants could permit publication of their ideas without jeopardizing their right to obtain patents in member countries. This was consistent with a policy of encouraging early disclosure of inventions. The introduction of the above-quoted words into the Paris Convention at the London revision of 1934 went further, not only reserving the rights of foreigners to obtain access to

national patent systems through reliance on convention filings, but also stipulating the nature of the right to be granted nationally. Article 4B, as amended in 1934, has the effect of ensuring that applicants who take full advantage of the delay inherent in the convention year are not prejudiced. It operates in the interests of patentees to preserve the purity of the monopoly right granted to patentees.

If incorporated into the law in its strictest sense, article 4B would enable applicants relying on convention priority to conceal their latent right to restrict use of new inventions for up to one year. This would operate to the disadvantage of industrialists in Canada who, innocent of steps taken abroad, proceed to invest in the adoption and exploitation of new technology.

Balancing the purity of the patentee's monopoly right on the other hand against the complaint of the Canadian industrialist,

"Why can't I find out if I am free to use new technology?",

the proposed law adopts publication as the determining event for foreclosing the establishment of rights by third parties.

The adoption of publication as the determining event under s 50 is consistent with the national treatment principle of art 2 of the Paris Convention. Applications of Canadian origin are subject to the same constraints as those of foreigners.

The need to provide relief from the apparent restrictions of article 4B has been recognized in other countries. The Nordic countries (Denmark, Finland, Norway, and Sweden) have all adopted common laws which include the following provision:

- "(1) Anyone who, at the time when a patent application was made available to the public, in this country made commercial use of the invention for which a patent is applied for, may, if the application results in a patent, obtain a compulsory licence for the exploitation, if very special reasons speak in its favour and if he had no knowledge of the application and had not reasonably been able to acquire such knowledge. Under corresponding conditions, anyone, who has made substantial preparations for commercial exploitation of the invention in this country, is similarly entitled.
- "(2) Such a compulsory licence may cover the period before the grant of the patent."*

In granting a full intervening right rather than a compulsory licence, as established under Nordic law, the proposed law maintains the policy of present s 58. Independent users will have a clear right to continue with what they have acquired, prior to public disclosure, without any obligation to pay

* The Danish Patents Act, 1967, s 48.
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compensation or royalties.

An alternative to proposed s 50 could be considered. Allowing patent rights to be applied against innocent users who have independently acquired knowledge of a subsequently patented invention would be inequitable and economically inefficient. In order to protect such users, the criteria for patentability could be amended to bar any application where independent use of the invention occurs prior to publication of a disclosure of the invention. Such a provision would emphasize the importance of early publication of inventions. It would parallel the criterion of requiring inventions to entail an inventive step, thus preventing patents from being granted for industrial activities which were incipient on an application's filing date and therefore likely to occur in any event.

There is nothing in the Paris Convention which would prevent adoption of such a standard for patentability. Professor Bodenhausen as Director of BIRPI stated in his "Guide to the Paris Convention" (p 15):

"... it should be noted... that... the scope (of the rules of the convention) is limited and they leave considerable freedom to member states to legislate on questions of industrial property according to their interests or preferences."

"In the field of patents, for example, the convention leaves the member states entirely free to establish the criteria for patentability..."

Section 50 of the proposed law is a compromise between this alternate proposal and the strictures of art 4B of the Paris Convention.

1.4 Intervening Rights Arising Through Amendment -- s 51

This section extends the circumstances under which intervening rights may arise.

Section 51(1) applies in the case in which a patent applicant amends to broaden the scope of his claims after publication, a right which will make the scope of monopoly being sought uncertain. However, s 51(1) will enable members of the public, who rely on the fact that certain activities are outside the scope of the published claims before a broadening amendment, to proceed with investing in such activities without fear that they will subsequently infringe the patent. Only persons, however, who rely on the published claim by taking steps to work the invention in Canada will be so protected.

Section 51(2) is included in order to encourage participation in the opposition process. Under s 51(1) steps must be taken to actually implement the invention in order to establish the intervening right. A person who files an opposition under

s 43 without taking steps to commence working the invention would make himself vulnerable to broadening of the claims. Section 51(2) reserves the option of obtaining intervening rights with respect to broadened claims, to persons who oppose, until the opposition process has terminated.

Section 51(3) compliments the provisions of s 26 which permits a patentee to retain his rights notwithstanding default in the payment of maintenance fees or the provision of information returns. The moment a patentee is in default, s 51(3) ensures that any person relying on this fact will not be prejudiced by reinstatement of the patentee's rights under s 26(5). A provision similar in nature is found in the US bill S-2504, s 152.

1.5 Transfer of Intervening Rights -- s 52

This section limits the extent to which intervening rights may be transferred. The intention is to prevent trafficking in such rights by way of licensing. Instead, such rights may only be transferred in association with the business in respect to which they arose. This is similar in principle to the policy of the common law that a trademark may only be transferred in connection with the goodwill of a business, or the US concept of a 'shop right' that accrues to employers in the case of employee inventions.

Section 52(3) leaves to regulations the formalities required to effect a transfer of intervening rights. Since intervening rights might not be considered as an interest in or under a patent which would have to be registered pursuant to s 81, s 52(3) affirms the obligation to register transactions respecting such rights.

1.6 Compulsory Licence for Nonworking -- s 53

This section entitles members of the public to obtain a compulsory licence to work an invention in Canada where, after the seventh year from priority, the patentee has failed to establish such working himself. The relationship of this provision to the Paris Convention, art 5 has been discussed previously with respect to ss 26 and 27. The policy of making such licences available is reflected in the present law, s 67(2)a.

Section 53(1) follows present s 67(1) in requiring patentees to disclose whether they are working an invention in Canada. Subsection 53(1)b enlarges on the present provisions by requiring the patentee to stipulate the facts believed to constitute working of the invention. This will permit interested persons to evaluate the bona fides of a patentee's claim that his invention is being worked in Canada.

The grant of a licence under s 53(2) is obligatory unless the patentee takes the steps set out in ss 52(2)a and b. Subsection

53(2)b (ii) gives the patentee an opportunity to raise as a legitimate reason for not granting such a licence the argument that there is a reasonable prospect that the invention will be worked in Canada. Article 5A(4) of the Paris Convention stipulates that an application for a compulsory licence shall be refused if the patentee can justify his failure to work locally. Subsection 53(2)b (ii) will enable patentees to raise arguments on this point as long as such arguments conclude by suggesting that there is a reasonable prospect that the invention will be worked in Canada.

The further ss 53(3) - (7) detail the procedure to be followed by the Patent Authority in disposing of the application and representations by the patentee. The application for compulsory licence will be rejected if local working or the prospect of local working is held to have been established by the Authority (s 53(6)), otherwise, the licence is granted (s 53(7)). Where an application for compulsory licence is rejected on the grounds that there is a reasonable prospect that the invention will be worked in Canada by the end of the ninth year, applicants may reapply under s 53(2) for a licence if, due to failure by the patentee to take further steps, the prospect of local working being established ceases to exist. New proceedings may then be held and a reevaluation of the prospect for local working made.

Where at the end of the ninth year the patentee has failed to establish local working, notwithstanding his previous representations that there is a reasonable prospect that the invention will be worked in Canada, the patent, by reason of the provisions of s 26 and 27 will terminate. A patentee objecting at this stage that his patent rights have been terminated contrary to article 5A of the Paris Convention, without a grant of a compulsory licence having been extant for two years, can be rejected on the basis that the patentee's own representations prevented grant of such a licence.

Section 53(8)a enlarges the definition of 'patentee' to permit licensees to resist an application for further licences. "Work on a commercial scale" is separately defined under s 53(8)b on the possibility that the regulations prescribed under this subsection may differ from regulations prescribed in other part of the proposed law respecting this definition.

In order to protect patentees from a change by regulation in the standard of working which they had not anticipated, s 53(9) ensures a three-year grace period in which to adjust to any variations in the definition of "work on a commercial scale".

2 Licences for Complementary Inventions -- s 54

Section 54 implements the proposal of the Economic Council (p 92) that licences should be available as of right to exploit complementary technology. The Economic Council indicated that it

approved of the proposals of the Ilsley Commission to make a licence available where "the working or efficient working in Canada of any other invention which makes a substantial contribution to the art is prevented or hindered" (part VIII, s 2(2)f (ii)). The Economic Council further suggested that this licensing provision should be restricted to prevent licences based on "patents that are marginal additions to a presently established art or product, and that have required a relatively small input of resources" (p 92).

Section 54(1) limits the availability of licences under this heading to cases where a person wishes to carry out an activity falling both within the claims of his own patent and the claims of another patent. Section 54(2) entitles the owner of a patent sought to be licensed to resist the application on the three grounds set forth.

Subsection 54(2)a contemplates the case where the owner of the primary patent has established a business enterprise in Canada on the expectation that he would have exclusive rights over the commercialization of that invention. Where the granting of a licence under this section would prejudice the commercial viability of his business operation, the application may be refused. Subsection 54(2)b implements the intentions of the Economic Council, described above. This subsection will prevent companies from attempting to use trivial improvements over a primary invention as a basis for obtaining a licence under this section. Subsection 54(3)c is included on the same grounds.

The effect of s 54 generally should be to support research and development of improvement inventions. Under the present law, the owner of an improvement invention may only exploit the improvement if the patentee of the primary invention consents. This limits the incentive for development of improvement inventions. Section 54 opens up the possibility that by making substantial improvement inventions, industry will have an opportunity to exploit the new technology they have developed.

Section 54(4) will enable the patentee of the primary invention to have access to the improvement. Such a crosslicence is not, however, made mandatory as would be required by the proposals of the Ilsley Commission (part XII, s 2(3)a, p 75). A hearing for grant of a crosslicence could nevertheless be held at the instigation of the primary patentee, on the basis of an independent application under s 54.

Proceedings under article 54 may be commenced without waiting for a three-year delay following grant of a patent. Such a delay is not required under article 5A of the Paris Convention, since the licence is not based on an abuse by the patentee. Rather, the right to obtain a licence under s 54 arises independently of the activities of the patentee. Furthermore, art 5A was amended at the Lisbon conference to clarify the understanding

that had always existed, that the three-year delay from grant for commencement of compulsory licence proceedings was intended to apply only in respect of failure to work or insufficient working (Lisbon Conference, pp 392-425).

3 Licences for Foods and Medicine -- s 55

This section is based on the provisions of present s 41. The arbitrary requirements of present s 41(1) and (2) requiring patentees to frame their claims to new foods or medicine in a process-dependent form have been deleted. This follows the recommendations of the Ilsley Commission (pp 93-94). Similar provisions were deleted from the UK Patents act in 1949, following the recommendations of the Swan Committee.

Sections 55(1) and (2) maintain the type of licences available under present ss 41(3) and (4). Section 55(3) also maintains the criteria established by the present sections for settling the amount of royalty to be paid.

Sections 55(4) and (5) replace the interim licence procedure established under present ss 41(5) and (6). Rather than incorporating a six-month delay prior to grant of an interim licence, s 55(4) makes such interim licence available immediately, if requested.

Section 55(5) adopts as an arbitrary royalty rate for the interim licence the rate that has been customarily awarded by the Commissioner, 4% of the net selling price of the medicine in final package form. The patentee will have an opportunity to argue for a different royalty rate in settling the terms of the final licence under s 55(3). Inclusion of these provisions respecting issue of interim licences permits deletion of the 18-month deadline set under present s 41(15) for disposing of any application.

Experience under s 41 has shown that patentees have generally been unable to establish any substantial grounds for opposing the grant of licences under these provisions. Since provisions were introduced in 1969 entitling licensees to import medicines, only four applications of this type have been refused. One was on the grounds of the bankruptcy of the applicant and the other three on grounds such as technical misstatements in the application which could be corrected by filing new applications.

Patentees under the proposed law will no longer be given an opportunity to argue grounds for not granting an interim licence. Instead, they will be entitled to raise such arguments on the application for a permanent licence. This change will provide motivation for patentees to cooperate in the speedy disposition of applications, and assist licensees in clarifying their status at an early date.

Section 55(12) clarifies the basis for the royalty set under s 55(5), following the practice established under present licences.

4 Government Use of Patented Inventions -- s 56

This section replaces s 19 of the present act and applies the policies adopted by the Ilsley Commission (part IX p 99). The ambiguity in the present law as to whether the crown in the right of the provinces is bound by the Patent Act is clarified by the definition under s 56(1)a. Under s 56(2) either the Government of Canada and the government of any of the provinces will be entitled to use an invention for governmental purposes.

Section 56(3) will enable contractors who are not acting as government agents to be protected from charges of infringement. This section is limited to allow such contractors to carry out work on behalf of the government. Section 56(4) allows the Government of Canada through a designated minister to extend this exception to agents and contractors carrying on activities in Canada on behalf of foreign governments. The section contemplates defence-production agreements, but can be extended by order in council to other types of activities.

Sections 56(5) and (6) establish that a patentee has both a right to be informed and a right to be compensated for use of his invention. The right to be informed is supported by commencing the three-year limitation period from the date of notice under s 56(7).

5 Compulsory Licences in the Public Interest -- s 57

Present s 67 establishes a number of grounds for the granting of compulsory licences beyond failure to work an invention in Canada. Section 57 maintains the grounds existing under present s 67(2)c, d, e and f. The wording adopted is taken generally from the proposals of the Ilsley Commission (part VIII, ss 2(2)c-g) and parallels the provisions of s 37 of the UK Patents Act of 1949.

Section 57(1) contemplates that an application for a licence under this section may be filed at any time, even prior to the grant of a patent. Since s 57(2) contemplates that licences will be granted under this section where Canadian industry is "unfairly prejudiced", interested persons who may have commenced use of an invention while an application is still pending will be able to determine their right to continue use of such invention under licence without having such use disrupted by the grant of the patent. As recognized by the Ilsley Commission (part VIII, s 5, pp 77-78), licensing proceedings under s 57 need not, by reason of the Paris Convention, be delayed until three years after grant. As indicated earlier with respect to

s 54(supra p 249) the amendments made at the Lisbon conference to the Paris Convention affirm that it was never the intention that article 5A of the Paris Convention should impose a delay on compulsory licensing in cases involving the public interest. All of the grounds established under s 57(2) deal with the need, either of consumers or of Canadian industry, to have access to use of inventions. Under s 57(4) licences will not be granted unless there is a reasonable prospect that they will be remedial.

Sections 57(2)b and c contemplate two types of situations. The first is where a patentee refused to grant a licence and the second where a licence has been granted with terms which are onerous. Section 57(6), following the proposal of the Ilsley Commission (part VIII, s 2(5)), ensures that licensees will not contract out of their right to take proceedings under this section.

By way of guidance, s 57(3) gives some indication of the types of terms which should be considered as unfairly prejudicing Canadian licensees. Subsection 57(3)a goes partway towards meeting the concern of the Economic Council that Canada should not bear more than her fair share of the costs of the international patent system. It also parallels the provisions of article 86 of the Treaty of Rome, which prohibits the application to trade partners of unequal conditions in respect of competitive transactions.

Subsection 57(3)b applies to the cases in which patent control over an industrial invention may tend to potentially displace competitors from the marketplace. The concept that the interests of patentees should be tempered by concern for other competitors in the marketplace is already recognized under the present law. Section 68(a)i of the present act, in particular, provides that the Commissioner, in setting royalties under compulsory licences, shall "endeavour to secure the widest possible use of the invention in Canada, consistent with the patentee deriving a reasonable advantage from his patent rights".

Subsection 57(3)b of the proposed law transfers this criterion of securing the widest possible use of inventions to the substantive provisions governing the granting of compulsory licences. The concept of 'reasonable advantage' is defined in terms of recovery of the special costs associated with invention and innovation. Thus this provision only applies where the patentee has more than recovered the special costs of inventing and innovation, thereby assuring that the primary function of the patent system in facilitating recovery of such costs is not disrupted.

The introduction of special treatment which depends on the extent to which a patentee has benefitted from exploitation of his patent rights is not novel. The UK Patents Act has for over sixty years

contained provisions permitting an extension of the patent term where the patentee has not been adequately remunerated (UK act, s 23). (Similar provisions were also included in Canada's pre-confederation patent act of 1849). Since patentees have in the past proved capable of demonstrating that they have been inadequately remunerated (ie unable to recover their special costs), it should not prove too difficult for potential licensees, at least in the clear cases, to demonstrate that a patentee has "more than recovered" his special costs.

Section 57(6) reflects similar provisions under s 43(7) and 45(4) of the proposed law. Section 57(7) enlarges the definition of "patented product" for the purpose of s 57 only to give maximum scope to the provision of s 57(2)a.

Specifically not incorporated into the proposed law are the grounds available under present s 67(2)b, by which a license may issue where the working of an invention in Canada is being prevented or hindered by importation from abroad of the patented article. Similarly, the ground proposed by the Ilsley Commission of making a licence available where the demand for the patented article is being met to a substantial extent by importation (part VIII, s 2(2)c) has not been included.

In both cases, the provisions contemplated by present s 67(2)b and the Ilsley proposal, such provisions would tend to support the working of new inventions in Canada. However, inclusion of a provision similar to present s 67(2)b under the proposed law would be unduly protectionist and contrary to the policy behind the exhaustion provisions of s 25. Patentees will be entitled to supply the Canadian market by importation, and Canadian producers manufacturing goods under licence will have to tolerate this level of competition from the patentee and persons related to him. Subsequent provisions (ss 59(3) - (5)) limit the ability of patentees to engage in unfair price-cutting practices which might prejudice licensees.

Particular in the case of the Ilsley proposal which would allow importation to be a ground for granting a compulsory licence, it would be inconsistent for the proposed law, at the same time, to specifically allow importation under the exhaustion provisions of s 25 and simultaneously grant compulsory licences on the basis that the patentee is supplying the Canadian market by importation. Such a provision might tend to encourage patentees to transfer all of the Canadian market to their Canadian licensees or Canadian manufacturing facilities; but this could entail undue artificial distortions of the economic relationships between licensors and licensees. Provisions for encouraging such transfers have been incorporated into the proposed law (ss 26, 27) but these features have been included on the assumption that the potential for importation under the exhaustion provisions (s 25) will moderate any tendencies towards inefficient or inappropriate industrial activities in Canada.

This section establishes the scope of the jurisdiction of the Patent Authority in granting licences under the provisions of the act. Section 58(1) gives the Authority full discretion to impose such terms and conditions on granting of licences it deems fit. This follows the recommendations of the Ilsley Commission (part VIII, s 2(3)), the provisions of the UK Patents Act (s 37(3)) and the provisions of the present Canadian act (s 68).

In order to prevent proceedings before the Authority from unduly delaying grant of a licence under a patent, s 58(2) expressly authorizes the granting of a licence subject to an interim royalty. This will enable the initial hearings to focus on the grounds for granting a licence with hearings on royalty rate following the actual granting of a licence.

The criterion to be used in determining the rate of compensation is, under s 58(3), the test of what a willing licensee would pay a willing licensor. In this respect, the proposed law does not follow the recommendations of the Economic Council.

The council recommended a basic statutory royalty rate, which could be varied after a licence had been in effect for three years (pp 95-96). The proposal of the Economic Council was made in the context of a system by which licences would be available as a right, without any hearings or proceedings. Since hearings will occur under the proposed law, resort to the arbitrary method of establishing an initial fixed royalty will not be necessary.

The test of the willing licensor and willing licensee has been adopted because it turns the compensation-setting exercise into a quasi fact-finding procedure. The parties will present to the Authority evidence of usage in similar cases by industry. The Authority will be guided on a case-by-case basis by actual circumstances in the marketplace. It will be up to the parties to show the contemporary value placed on similar technology by other licensors and licensees. The test of the willing licensor and willing licensee has long been recognized under patent law. It is the standard use in evaluating compensation owed by Her Majesty in respect of use of an invention by the government under s 19 of the present act (cf *The King v Irving Air Chute Inc.* (1949) SCR 613).

Section 58(4) will permit the Authority to rehear licence applications when new circumstances arise. Section 58(5) specifically authorizes the transfer of such a licence with the approval of the Authority. Section 58(6) gives the Authority jurisdiction to interfere with any outstanding voluntary licences which may have been assumed by compulsory licence applicants in order to ensure that compulsory licences issued under the act may be properly exploited. Section 58(6) will enable the Authority to ensure that such prior obligations will not interfere with privileges obtained under compulsory licensing. A similar section was

incorporated in the Ilsley proposals (part VIII, s 3(2), p 76) and parallels the provisions of the UK Patents Act (s 37(4)).

7 General Provisions Respecting Statutory Licences -- s 59

Section 59(1) gives the Federal Court jurisdiction to enforce the compulsory licensing provisions of the proposed law. The jurisdiction of the Court at present extends to "cases in which a remedy is sought...respecting any patent of invention..." (Federal Court Act, RSC 1970 2d Supp. c 10, s 20). Interpreting similar provisions under its predecessor, the Exchequer Court Act, it has been held that this provision did not extend to the Court's jurisdiction to enforce terms under patent licences (cf McCracken and Concrete Pipe Ltd v Watson, (1932), Ex CR 83). * Section 59(1) assures that the Federal Court will have jurisdiction with respect to compulsory licences issued under the act.

Section 59(2), for certainty, affirms that the exhaustion provisions of s 25 will continue to apply notwithstanding that licences have been granted under the act.

Sections 59(3) - (5) have been included to prevent patentees who become subject to a compulsory licence from adopting predatory pricing practices against such licensees. There is nothing under the present law to prevent a patentee, once a compulsory licence has been granted, from reducing the price of goods supplied to the Canadian market to such a point that the Canadian licensee is unable to compete. The mere threat that an embittered patentee may undertake such a price-cutting exercise may deter resort to the compulsory licensing provisions of the act. This type of practice is expressly prohibited under s 59(3).

The Antidumping Act RSC 1970 c A-15, as presently drafted, does not appear to contemplate protecting Canadian industry from goods imported at prices above those established under competitive market conditions. Since competitive conditions would not exist in a foreign market governed by patent rights, uncertainty as to the 'normal value' of goods under such provisions makes the present provisions of the antidumping legislation difficult to apply. Section 59(5) clarifies this uncertainty, adopting the actual pricing practice in the home market as the standard for the normal value of such goods.

* But see the more cautious comments in Kellogg Co. v Kellogg (1941) SCR 242

CHAPTER 6 -- ENFORCEMENT OF PATENT RIGHTS

This chapter deals with the remedies to which patentees are entitled and the procedures that must be followed when patent rights have been infringed. In this chapter, in particular, sections have been incorporated in order to assist citizens to appreciate the nature of the patent law.

1 Proceedings for Infringement -- s 60

Section 60(1) defines "infringement" in terms of the rights granted under chapter 2. Section 60(4) gives status to take proceedings for infringement not only to the owner of a patent, but also to licensees who hold an interest under the patent. Since licensees must bear the costs of paying royalties, they should be entitled to take action to restrain infringers who are competing without carrying such costs. In order to motivate such licensees to comply with the subsequent registration requirements of the law (s 80(1)), their entitlement to participate in infringement proceedings and recover damages is, however, conditioned under s 60(4) on their interest being registered.

Correspondingly, since licensees will be entitled to independently initiate infringement proceedings on their own account, s 60(5) extends the requirement of present s 57(2) by providing for all licensees to be made parties to any infringement actions. The exceptions contemplated by the reference to regulations would include cases where a licensee who cannot presently afford to participate agrees to abide by the results of the litigation, but reserving his right to claim damages.

Section 60(2), following the proposals of the Ilsley Commission (part XII s 1(a) p 113), gives exclusive jurisdiction to the federal courts to enforce patent rights. The federal courts presently have exclusive jurisdiction to impeach or annul any patent (Federal Court Act, RSC 1970 2d Supp, s 20(b)). Subsequent provisions of the proposed law (s 70(4)) establish that a successful defence of invalidity shall operate to revoke a patent. Since the validity of patents is almost universally raised as an issue in patent litigation, it is appropriate that all such proceedings be restricted to the federal courts.

The amount of patent litigation annually in Canada is relatively limited. Such litigation is exceedingly complex. It is preferable to restrict all patent litigation to the federal courts in order to assist that court in maintaining its expertise in such matters. It is also desirable to restrict patent litigation to a single court in order to prevent a multiplicity of proceedings in separate courts (cf General Foods Ltd v Struthers Scientific Corp. (1972) 4 CPR (2d) 97).

The scope of the jurisdiction of the Court established under proposed s 60(2) follows the wording of s 20 of the Federal

Court Act. While these provisions are intended to detail the procedures and rights of litigants in a patent action, s 60(2) is worded so as not to foreclose the court from granting any other traditional remedies recognized in law which are not contrary to the provisions of the proposed law.

Section 60(3) establishes a statutory limitation period for the commencement of legal actions. The period of three years reflects a similar limitation period existing under the present Copyright Act (RSC 1970 c C-30, s 24). The inclusion of an express limitation period in the patent statute will make the law consistent in this respect across Canada. Presently, the limitation period may vary according to the province in which the litigation originates.

2 Effect of Actual Notice -- s 61

Under the present Canadian law, a person is liable for damages for infringement irrespective of whether he is aware of the actual existence of a relevant patent. In order to limit unnecessary loss and injury that may arise out of enforcement of the patent right, the obligation to pay damages under s 61(1) commences only once a person has received actual notice of a patent. A similar policy was recommended by the Ilesley Commission (part XI, s 5(1)) and exists under the present US law, (s 287) and the UK Patents Act (s 59). The provisions of the US law are also followed in respect of patent marking.

Section 24 of the present act makes the marking of patented articles mandatory. The only sanction for failure to mark, however, under the present law is a fine of \$100 (s 77). Failure to mark does not impair a patentee's rights. The proposed law deletes any obligation to mark patented articles. But, following in part the US provisions, s 61(2) gives to a manufacturer who does mark his articles the advantage of a presumption that, for the purposes of s 61(1), certain classes of infringers have received actual notice.

Section 61(2) applies only against persons who import or manufacture products. Such products are not likely to enter the Canadian market without a prior market survey having been made. The existence in the market of competing goods marked with reference to patent rights would likely become apparent in the course of such a survey. Importers and manufacturers are singled out for this special provision because of the extensive damage that these types of parties can inflict on a patentee. As the originating source of infringing goods, such persons are capable of satisfying a substantial portion of the demand for a patented article in the marketplace and thereby reducing the ability of the patentee to enjoy the full benefit of his patent right.

The standard of marking required is set out in s 61(3). Section 61(4) is intended to prevent patentees from attempting to obtain the benefits of the presumption of s 61(2) by recital of long lists of patents which might only possibly be relevant to the

product being marketed. This provision supplements subsequent provisions prohibiting false marking (s 100).

3 Stock in the Hands of Innocent Infringers -- s 62

The law presently recognizes, in addition to the right to claim damages, a right for patentees to demand forfeiture of goods which infringe a patent. Whereas s 61 relieves a person from liability for damages for acts done prior to acquiring notice, s 62 prevents the right of forfeiture from applying against goods acquired before notice. In order to prevent such goods from prejudicing the patentee's rights to exclusive exploitation of the Canadian market, goods in the hands of innocent infringers may only be disposed under s 62 in a manner which does not interfere with the patentee's exclusive right to supply the Canadian market.

4 Powers of the Court in Infringement Actions -- s 63

Section 63(1) follows generally the wording of present s 57(1) in establishing the entitlement of a patentee and persons claiming under him to obtain damages from an infringer. Section 63(2) contemplates the possibility that the Patent Authority may acquire expertise in evaluating the economic impact of infringement on patentees.

In order to prevent an award of substantial damages from interfering with the otherwise normal business affairs of an infringer, s 63(3) gives the court jurisdiction to defer payment of damages in the manner described.

Section 63(4) maintains the present right of the patentee to order delivery-up of goods produced by a person after he has acquired actual notice of the existence of a patent. This section is prefaced by a proviso which will permit the court to reduce the amount of damages awarded when delivery-up takes place. A similar power to direct disposition of means, such as machinery, which is adapted for infringing a patent, is granted to the court under s 63(5)b. This right normally arises in consequence of the grant of an injunction, the right to which is confirmed under s 63(5)a. Both of these provisions are treated together under s 63(5) as being subject to the principles of equity as developed historically within the courts.

Section 63(7) abolishes the present remedy available to patentees to request an accounting of profits made by an infringer through his infringing activities. This exclusion was recommended by the Ilsley Commission (part XI, s 1(1) p 105). Such an accounting is extremely burdensome on an infringer, since, under the law as it has developed, the patentee need only prove the infringer's gross receipts and then the burden is shifted to the infringer to develop in detail his costs. Patentees may acquire unreasonable leverage for purposes of negotiating settlement by threatening to submit an infringer to such an accounting.

The power of the court to order infringers to keep track of sales made pending litigation, for the purposes of calculating damages, is, however, maintained under s 63(5)c. This latter type of accounting relates to the degree of infringement rather than the costs of production. A similar procedure may also be imposed under s 23(5)b in order to preserve a patentee's interim rights pending grant of his patent.

Section 63(6) continues the exhaustion policy of s 25 that the rights of patentees should not extend to permit them to follow goods into the marketplace after they have received an initial remuneration for the goods.

5 Limitations on Right to Obtain Damages -- s 64

This section prevents the claiming of damages by parties whose interest in a patent was not registered under s 64 or who have not designated a representative for service in Canada as required in s 99. Damages will of course accrue as soon as these defects have been rectified.

6 Nature of Damages to Be Awarded on Infringement -- s 65

This section serves as much as advice to the lay reader as a direction to the court for calculating the quantum of damages. Subsections 65(a) and (c) reflect established jurisprudence. The proviso that damages should be no less than a reasonable royalty is also expressly stated in the US code (s 284).

The provision of s 65(b) that the plaintiff is entitled to compensation for loss of goodwill is new. Introduction of this new feature into the proposed law therefore merits further explanation.

The traditional basis under the law for compensating a party whose rights have been violated has been to award as damages a sum of money which will put the injured party in the same position as he would have been, but for the violation of his rights. Subsections 65(a) and (c) provide compensation on a somewhat narrower basis. These sections apply only with respect to past infringement and make no provision for injury or loss to the patentee arising in the future on account of the defendant's past infringing actions.

Section 65(b) will permit patentees to claim compensation for damaging effects which persist after a defendant has ceased infringing. Such dislocations would include loss of the business connections which would normally have flowed from the marketing of a new invention and loss of control over the price at which patented goods will continue to be sold.

Compensation under this section would also extend to losses reflected by reduced royalties under voluntarily negotiated licences which were prejudiced by the defendant's infringing activities.

The patent law of Japan expressly recognizes that infringement is capable of damaging the goodwill of patentees. The Japanese patent law of 1959 (as amended to January 1, 1971) contains the following provision:

"Art 106. The Court may order the person who has impaired the business reputation of the patentee.. by way of having infringed intentionally or negligently on the patent right..., to take measures necessary for recovery of the business reputation of the patentee...in lieu of, or together with, a claim for damages, upon request from the patentee"..

While the proposed law does not contemplate the granting of a mandatory order of the types suggested under the above excerpt from the Japanese law, s 65(b) does at least recognize that patentees are entitled to compensation where infringers damage their business reputation.

7 Exemplary Damages for Repeated Infringement -- s 66

Both the present and proposed law grant to the patentee the right to obtain an injunction against continuing infringement of patent rights. The present procedure for repeated infringement for violation of an injunction is to commence proceedings for contempt of court. Contempt proceedings are criminal in nature and high standards of proof are imposed on the patentee.

It has long been accepted that the courts have inherent power to award exemplary damages for flagrant violations of rights. Section 66 expressly recognizes this type of remedy. It also gives the patentee the alternative of proceeding in cases of repeated infringement by way of civil process rather than by contempt proceedings. Section 66(b) extends the section to situations where there has been a prior negotiated settlement in order to support and encourage avoidance of unnecessary litigation.

8 Defences in Infringement Proceedings -- s 67

Section 46 provides that every patent shall be deemed valid until terminated or revoked pursuant to the proposed law. Section 67 ensures that a defendant will be entitled to resist an action for past infringement on the grounds that the patent, although not revoked, would, if challenged, be revocable. This type of defence is recognized under the present law (s 61). Section 67(1)b is intended to preserve any other grounds on which a defendant would be entitled to rely, such as implied licence, waiver or estoppel, based upon inequitable acts by the patentee.

CHAPTER 7 -- REVOCATION OF PATENTS

This chapter deals with the circumstances under which a patent granted pursuant to ss 44(4) may be revoked. Generally, provisions for revocation of patents after grant are maintained in order to encourage compliance with the pregrant conditions of the law.

1 Jurisdiction of the Federal Court -- s 70

Sections 70(1) and (2) maintain the present exclusive jurisdiction of the Federal Court to revoke a patent at the instance of the Attorney General of Canada or any interested person (present s 62(1)).

Section 70(3) makes the grounds for revocation established under chapter 7 exhaustive.

Under the present law it is possible for a defendant to raise the invalidity of a patent as a defence in an infringement action. This type of defence is retained under the proposed law (present s 67). However, where such a defence succeeds under the present law, the ruling that the patent is invalid binds only the parties to the litigation and the patentee may still assert his patent against other members of the public. Section 70(4) enlarges the effect of such a successful defence under s 67, ensuring that a patent held invalid is effectively revoked for the purposes of all future proceedings, thereby avoiding the cost and uncertainty of repetitive litigation. This follows a recommendation made by the Ilesley Commission (part XII s 2(b) p 113), the US Presidential Commission (recommendation #23) and the effect of recent US Supreme Court jurisprudence based on collateral estoppel (cf *University of Illinois Foundation v Blonder-Tongue* (1971), 402 US 313).

Sections 70(5) and (6) deal with settlement of proceedings which have commenced in the Federal Court respecting the validity of a patent. In the interest of limiting litigation and reducing uncertainty respecting the validity of patents, these sections contemplate full disclosure of the terms of any settlement in proceedings where validity has been raised as an issue. Factors affecting the validity of a patent may have become apparent to the parties in the course of the litigation. Section 70(5) will prevent the patentee from protecting a questionable patent by discontinuing litigation in order to suppress facts pertaining to its validity. The participation of the attorney general under s 70(6) will assist the court in determining whether the provisions are included in US bill S-2504 (s 139(d)) requiring filing of the full terms of all settlement agreements in any opposition proceedings.

Section 71 together with s 70(3) of the proposed law set out exhaustively the grounds upon which a patent may be revoked. Subject to other provisions in chapter 7 (ss 75-77) the grounds under s 70 for revoking a patent generally reflect areas where errors of substance occurred in the application and examination process.

Consistent with the policy discussed earlier with respect to the entitlement of patentees to amend their specification (s 38, supra p 221) s 71(1)b provides that specifications shall be tested as of the date that they are challenged.

Subsections 71(1)d and e are intended to ensure that patentees comply fully with their obligation to provide accurate information to the Patent Office under the provisions of s 42(4)e. Both of these sections only apply where the failure to provide information or the provision of incorrect information "would likely have" prejudiced the examination of the application by the Patent Office. Use of the subjunctive is intended to ensure that this is an issue of law rather than fact, which may be decided without conducting an inquiry as to whether officers within the Patent Office were actually misled.

Section 71(1)h provides a sanction to ensure that patentees who take proceedings under s 22 to prevent importation of the products manufactured abroad by a patented process comply with terms imposed by the Authority in a certificate issued under s 22(3).

Section 71(1)g, together with ss 71(3) - (5) deal with the use of patents in relation to offences under the Combines Investigation Act. These provisions are intended to deter patentees from using their patent rights to influence other persons to carry out offences under the Combines Investigation Act.

Under the present law, use of a patent to facilitate commission of a combines offence will only impair enforcement of the patent where title to the patent was acquired with an illicit object in mind (cf *Philco Products Ltd v Thermionics Ltd* (1940) SCR 501.) Section 71(1)g removes the limitation that illicit intent must have arisen as of the date of and in association with acquisition of title to the patent.

Subsection 71(1)g (i) conditions liability to revocation on the commencement of an infringement action by the patentee. This provision is intended to prevent patentees from being subjected to an examination of their business practices on the initiative of competitors. In a similar vein, subsection 71(1)g (ii) limits the liability of the patent to revocation to a two-year period following the commission of the offence. This two-year limitation will enable patentees who may have committed an offence to rehabilitate their patent rights by discontinuing questionable or

illegal practices for two years. The object, as recognized by both of these provisions, is to discourage use of patent rights to commit combines offences, rather than to establish additional grounds for destroying otherwise invalid patent rights.

The provisions of s 71(1)g overlap, to some extent, the provisions in the Combines Investigation Act. Section 71(3) ensures that where an offence has been dealt with under the Combines Investigation Act, proceedings under the Patent Act will be barred. Similarly, s 71(5), paralleling the provisions of s 29 of the Combines Investigation Act, allows, as an alternative to revocation, a lesser penalty by way of compulsory licence or a suspension of rights rather than revocation. Section 71(4) will enable the attorney general to participate in proceedings under s 71(1)g and ensure that the public interest in enforcing competition policy is properly represented.

3 Grounds for Revoking a Claim of a Patent -- s 72

An effort has been made in the proposed law to distinguish between the invention, which forms the basis for grant of a patent, and the scope of monopoly awarded to patentees as part of their patent right. Section 72 therefore deals separately with the grounds for revoking individual claims.

As with respect to the specification under s 71(1)b, claims under s 72(1)a are tested as of the date that they are challenged. Patentees will be entitled, by entering amendments under s 38, to correct claims which would otherwise be invalid as extending too broadly, beyond the scope of the invention.

Section 72(1)b is introduced in order to ensure that claims which have been broadened pursuant to the provisions of s 38(3) do not extend unfairly beyond the scope of the invention as disclosed in the original priority document. This provision is intended to deter undue broadening of claims by introduction of amendments after an application has been filed in Canada. Section 72(1)c is intended to discourage applicants from making unfair claims to priority at the time that the initial filing in Canada is made.

Section 72(2) abolishes the technical ground now existing by which a claim may be invalidated if something lying within the language of the claim lacks utility. This ground for invalidating a claim has been developed judicially (cf Minerals Separation North American Corporation v Noranda Mines Ltd supra p 220). Recent judicial decision have tended to narrow this policy (cf Burton Parsons v Hewlett Packard Ltd, (1975) 17 CPR (2d) 97; Farbwerke Hoechst AG et al v Halocarbon (Ontario) Ltd (supra p 196). Section 72(2) ensures that patent claims will not be needlessly defeated on this technical ground.

This section, consistent with previous sections giving the Patent Authority jurisdiction to evaluate whether an invention is being worked in Canada (ss 22(2), 53(4), and 67(2)) makes it possible for the Federal Court, in its discretion to refer such issue to the Authority. In the absence of a statutory reference of this nature, the court would have no option but to make this determination itself, without reference to the Patent Authority.

5 Presumption of Validity -- s 74

This section replaces present s 47 which provides:

"47. Every patent granted... shall thereafter be prima facie valid..."

Judicial interpretation of this provision has varied over time. Some pronouncements have suggested that the presumption of validity is not an easy one to discharge (cf Thorson P in McPhar Engineering Co of Canada Ltd v Sharpe Instruments Ltd (1960 21 Fox Pat C 1 at 28). More recently, this presumption has been treated as only arising where no evidence is offered questioning the validity of a patent. According to this viewpoint, once the party attacking the patent has introduced evidence, the Court, in considering this evidence and in determining whether it establishes the invalidity of the patent, must not take the presumption into account (cf Pratte J in Rubbermaid (Canada) Ltd v Tucker Plastic Products Ltd 8 CPR (2d) 6 at p 14).

The strength of the presumption of validity associated with a patent may have a considerable effect on parties negotiating a settlement as an alternative to litigation. If the results of litigation appear unpredictable, a patentee may be inclined to accept a settlement which entails granting of a licence. The possibility that mere threat of litigation may force patentees to grant licences will weaken the value of the patent right as an incentive to innovation.

On the other hand, if the presumption of validity is strong, patentees may insist on pressing for litigation or extracting more onerous settlements on the basis of patents which, in fact, qualify for revocation.

Some presumption of validity is justified on the basis that the Patent Office examines every application prior to grant of a patent. However, revocation may be based upon newly discovered prior art which never came to the attention of the Patent Office during its examination.

Section 74 attempts to clarify the standard of the presumption of validity associated with a granted patent, and at the same time accommodate those cases where new prior art is discovered after a patent has issued. The standard established under the combined effect of ss 74(1) and (2) with respect to matters considered by the Patent Office is positive. The judge will have to be "satisfied" that the conditions for revocation prevail, for

example, that the patent should never have been granted. This is the term presently used under s 42 whereby the Commissioner may refuse an application.

This standard is similar to, though not as emphatic as, the provisions of s 41 of the present act (s 55 of the proposed law). These sections stipulate that the Commissioner shall grant a compulsory licence for inventions relating to food or medicine "unless he sees good reason to the contrary". The effect in both cases is that the expected course of events will only be disturbed where it is apparent that such interference is justified.

Section 74(1) is, however, qualified to prevent any presumption or bias arising where new prior art is introduced into revocation proceedings. In a case where an alleged infringing defendant, through extensive research, is able to discover documents or facts overlooked by the Patent Office that suggest the patent should never have been granted, the judge will apply the newly discovered prior art to the invention, testing for patentability in the same manner as would have been done in the Patent Office had all the facts been originally available.

The presumption of s 74 will also by reason of s 43(9) not operate in proceedings under s 43(8) in which an intervener who has opposed grant of a patent applies to the Federal Court for an order revoking the patent.

6 Unimpeachability -- s 74

As indicated earlier in the discussion respecting patentability (supra, p 178) the requirements of novelty governing the grant of patents may significantly interfere with the value and performance of the patent right as an incentive instrument. This will be true as long as a patent may be revoked after grant on the grounds that, due to the prior art, the invention lacks the requisite characteristics of novelty needed to support grant of a patent.

This flaw in the patent law and the trend by which it has developed has been examined by E.W. Hulme in the Law Quarterly Review.* After reviewing the historical developments in the United Kingdom by which the standard of novelty for patents shifted from "never-before-used within the realm within living memory" to the standard of "never-before-disclosed" as evinced by Lord Mansfield (cf above, pp 53-4), Hulme observed (p 195):

Under the old law the inventor could claim the whole of the difference between the state of the art as he found it and the state of the art as he proposed to

* Vol 33 LQR 180 (1917).

reconstitute it; but, with systems of examination for novelty founded upon Lord Mansfield's doctrine, the inventor is debarred from incorporating in his claims unused public knowledge. The further examination is pushed, the further the patent claim is attenuated. As a result capital is not attracted to invention, for a patent which has no 'litigating' value is not worth paying for. That patents under the modern system retain a certain business value is due to the fact that all forms of barter are based to some extent upon 'bluff' and the word 'patent' still retains some advertising value...

"A practical solution would be to limit the operation of the law of novelty, in cases where commercial working is shown, to prior user, and to insist upon unrestricted proof of novelty where working is not pretended. Under this system examination for novelty could be reduced to an examination through patents in force in a country, with a delay of a year or two in removing specifications from the examiners' files to enable manufacturers to come in, if they chose, and work patents upon their expiry. The patentee would thus secure broader claims and wider restraining powers, while the relief granted to the patentee, who could prove 'commercial working', would add materially to the security of patents as a medium for investment."*

If it is accepted, as suggested in the preamble of chapter 7 (supra p 261) that provisions for revocation of patents are maintained in the law in order to encourage compliance with the pregrant provisions of the law, then it may be possible to limit the grounds for revocation where this will serve another useful purpose, allowing certain patents which should never have been granted to survive.

Novelty was originally introduced as a prerequisite to patentability in order to prevent such rights from interfering with established practices within the country. The Statute of Monopolies affirmed the principle that when a patent had been granted for a "manner of manufacture" which was not new, then such a patent was unenforceable and any patentee attempting to assert it would be liable to triple damages. In this way the early law provided a sanction to deter applications for invalid patents and to protect the public interest in freedom to pursue established practices.

Modern circumstances dictate adoption of standards of novelty which refer to prior disclosures as well as to prior use. Ex-

* See also the article by L.J. Harris entitled "Reflections on Some Pending Patent Legislation", 56 JPOS 523 at pp 524-540, for discussion of a partially 'incontestable' patent; and "Do We Really Need a Perfect Patent" by Howard I. Forman, The Conference Board Record, January, 1976, p 49.

amination of applications has been introduced in order to prevent applicants from obtaining patents for inventions which do not meet the standards of novelty. Examination cannot, however, guarantee the novelty of an invention for which a patent is granted.

While some postgrant provisions should continue to exist allowing revocation of patents improperly granted in order to deter applicants from pursuing improper applications, it is not necessary that the possibility of revocation be maintained throughout the entire life of the patent. Provision of an adequate period during which persons, who have established use of an invention or are prepared to commence production based on the invention, may apply for revocation, will both protect the legitimate expectations of such persons and deter applicants from pursuing applications which are not, in fact, patentable.

Section 71(1)a allows that a patent may be revoked where an application did not disclose subject matter which was patentable within the terms of chapter 1 of the proposed law. Sections 12 to 14 of that chapter specify the standards of novelty and inventive step that must be met to support grant of a patent.

Where a patent has issued, the application will necessarily have been previously published pursuant to s 40(1), the application will have been examined within the Patent Office pursuant to the provisions of s 42(1), and interested members will have been allowed to intervene to oppose allowance of the application, as stipulated by s 43. Interested persons will also have the right during the initial period of the patent term, to apply under s 70(1) to the Federal Court for an order revoking the patent. Through these procedures, adequate opportunities will exist for challenging patents which do not meet the novelty standards of ss 12 to 14.

After the ninth year from priority date, by reason of the provisions of s 27(1), only those patents which are actually being worked in Canada will remain in force. Where such working has commenced, money will have been invested in the course of introducing this invention into Canadian industry. Since one of the objects of the proposed law is to support the introduction of new technology into Canada through encouraging the working of new inventions in Canada and since the threat of revocation may be seen by patentees as a serious defect, reducing the force of the patent right as an incentive to invest, s 75(1) establishes that, after the ninth year, no patent may be revoked for lack of novelty. Section 75(2) extends this principle not only to the patent as a whole, but to each of the individual claims, which may independently be revoked under s 71 for, in effect, lack of novelty.

Up until the end of the ninth year, industrialists interested in adopting an invention will have had the entire period following publication to challenge the patentee's rights. Section 75, by reason of the provisions of s 75(3), will not apply to any proceedings commenced during that period.

But industrialists who choose not to challenge the validity of a patent until after the patentee has invested in its introduction of an invention into Canada, (and possibly demonstrated its worth or commercial viability in the marketplace) will either have to wait until the patent expires or demonstrate need for access to the invention under s 57, in order to utilize a patentee's invention.

Industrialists who have commenced to use an invention or who have made preparations to do so prior to publication, will have acquired and will continue to enjoy intervening rights under s 50 of the proposed law. Therefore, s 75 will not do violence to the principle that the patent right should not interfere with established practices.

Postgrant limitations on revocation proceedings are not new. Under the preconfederation laws of the Province of Canada, proceedings for repeal of a patent by scire facias under the patent act of 1842 (s 17, 12 Vic c34) were limited to the first two years following the grant of the patent (cf J.G. Ridout, "The Patent Law of the Dominion of Canada", 1894 p 332). The Japanese patent law also contains a provision under art 124 which prevents a patent from being invalidated after five years from grant on grounds of prior foreign disclosure.*

Canada's present Trade Marks Act (RSC 1970 c T-10) contains provisions for making trademark rights incontestable on certain grounds. Section 17(2) provides that after five years a registered trademark may not be expunged on the grounds of prior use by an earlier manufacturer except in cases of fraudulent registration.

All the provisions of s 71 not relating to novelty will continue to apply as grounds for revocation throughout the full patent term, particularly ss 71(1) d and e. This will limit any tendency on the part of patentees to attempt to obtain patent rights through failing to disclose relevant prior art.

* Article 124 of the Japanese patent law of 1959 provides as follows:

"In case a patent has been granted on the invention which has been described in a printed publication circulated in a foreign country prior to the application for a patent or which would be contrived with ease by a person of ordinary learning in the technological field to which such invention belongs on the basis of such invention, a trial mentioned in para 1 of the preceding article on such patent may not be demanded after five years have elapsed as from the day of registration of the creation of a patent right."

This proposal to limit subsequent to grant the grounds for revocation of a patent may also be viewed as a postgrant change in the standard of patentability. This is not a new concept. Section 63 of the present law operates to prevent impeachment of a patent on grounds of failure to meet the requirements of s 28(1)a by stipulating that an invention known by another person before the patentee-inventor invented it must have become available to the public prior to the patentee's filing date in order to invalidate the patent.

7 Amendment During Litigation -- s 76

A patent may, under ss 71(1)b or 72(1), be revoked if the disclosure is defective or the claims extend too broadly. Section 38 gives patentees broad powers to amend both claims and disclosure. In some cases, amendments introduced under s 38 will be able to make patents valid which otherwise would have been vulnerable to revocation proceedings.

Patentees are encouraged to come forward and make amendments where defects in their patents are discovered. Such amendments will increase the value of the patent disclosure. They will also reduce the incidence of litigation.

But members of the public are also entitled to challenge patents on the grounds that they are defective. The threat of such proceedings should motivate patentees to move promptly when they discover defects in their patents. But once impeachment proceedings have commenced, s 39a operates to prevent amendments from being made under s 38.

Rather than place the patentee in the position of necessarily losing all his patent rights by reason of what may be minor defects in his disclosure or claims, s 76 allows amendments to be made at the discretion of the court. The litigant who promptly commences revocation proceedings may be rewarded by the granting of the special rights set out in s 76(4).

Section 76(4) also permits such rights to be extended to all parties to the litigation. This will allow other persons who are interested in using the invention and who come forward and join as parties to the litigation to obtain such rights as well.

Under the publication provisions of s 39a(2) such persons will have an opportunity to obtain notice of the existence of the litigation. By enabling interested persons to join in the litigation, multiple actions will be avoided, and no member of the public will obtain a preferential position by reason only of being the first to commence revocation proceedings. Also, the sanction to encourage patentees to amend voluntarily at an early date (prior to revocation proceedings) will be correspondingly increased.

The provisions of s 76 continue the policy suggested in the words of present s 55, that where by reason of an involuntary error or omission a material allegation in the specification is untrue, the patentee may still be entitled to the "remainder of his invention pro tanto". Section 76 is also similar to provisions in the UK patent law (s 30).

8 Amendment to Designation of Inventors -- s 77

Section 38 permits amendment after grant of a defective disclosure or defective claims and s 39 permits amendment to the designation of inventors, but while s 76 recognizes that attempts to amend a disclosure or claims in the course of litigation should be subject to substantial provisions to protect interested members of the public, s 77 recognizes that failure to properly identify all the inventors is not a matter of similar substance.

Section 77(1) has the effect that as long as at least one person having a proper interest in the invention has applied for a patent, the patent should not be revoked. However, s 77(2) also recognizes that proper full disclosure and participation of qualified inventor in the application procedure is desirable and should be encouraged.

Litigants should have a right to know the full identity of all participating inventors or persons having an interest in the right to apply for a patent in order that they may properly examine the circumstances surrounding the making of the invention. Knowledge possessed by some of these persons may reflect on the state of the art prior to filing and therefore on the validity of the patent.

Section 77(2) allows suspension of proceedings until all inventors and all persons having an interest in the right to apply for a patent have been named. As a sanction, s 72(2)b permits the court to deny the patentee the right to past damages where prejudice has occurred.

Section 77(3) follows the policy discussed earlier (supra, p 214) under s 32(1) and subsequently (infra, p 273) under ss 84 and 85 with respect to entitlement to patents in cases of joint ownership. Section 77(3) ensures that the matters of infringement and beneficial entitlement to any proceeds recovered in an infringement action will be dealt with as separate, independent issues.

CHAPTER 8 -- TRANSFER OF RIGHTS

This chapter deals with the transfer and disposition of rights respecting patents and inventions. It extends not only to rights to and over Canadian patents but rights arising in Canada to obtain foreign patents as well.

1 Assignment -- 80

Subsections 80(1) and (2) establish the general principle that rights respecting patents are assignable. These two sections distinguish between ownership of a patent or application and an interest in or under a patent or application. This distinction has been made in order to permit ss 80(3) and (4) to deal separately with attempts to transfer less than whole title and control over rights associated with a patent.

Present s 53(1) allows any part interest in a patent to be assigned. Partial interests in a patent might be created by dividing the rights territorially, by field of use, over time and in various other ways. Section 80(3) limits the right to divide interests in a patent territorially and s 80(4) applied to attempts to assign rights under future inventions.

The limitation in s 80(3), that rights may not be severed territorially within Canada is adopted as a complement to exhaustion as created under s 25. While s 25 ensures the free circulation of goods introduced into the market place, s 80(3) will ensure licensees the right, once licensed, to sell their patented products anywhere in Canada.

Since exhaustion will permit the circulation of patented goods throughout the Canadian market, little scope will be left for patentees to benefit from market allocation policies. It would be preferable under these circumstances to ensure that licensees are free to supply goods directly throughout Canada.

Section 80(4) prohibits assignments of future rights in inventions. As indicated in part 3 under the title "Competition Policy" (supra p 155), this provision is intended to prevent Canadian industry from losing the benefits of control over improvement inventions developed in Canada in the course of exploiting licensed technology. Subsequent provisions relax this restraint in cases where business practicalities demand that a present agreement be made with respect to the disposition of future rights (ss 86 and 87).

2 Registration -- 81

This section represents one of the instances discussed earlier in part 3 under the title "Information Policy" (supra p 132) in which patentees will be required to provide details regarding the actual disposition of their patent rights.

As indicated earlier in part 2 under the title "Need for Reform" (p 116) , present s 53(2) stipulates that every assignment and every exclusive licence shall be registered. Proposed s 81(1) extends this requirement to every kind of interest in or under a patent or application. This will bring the Canadian registration requirements into conformity with the corresponding provisions of the UK Patents Act (s 74). The BIRPI model law of 1964, as well, recommended that all licences be registered because it is desirable that the government be informed about the grant of all licences and the economic value of the patents involved (Model Law s 28(3)).

Section 81(1) provides that "prescribed particulars" must be registered. This requirement contemplates a registration system in which the parties filing particulars will partially analyze and classify the essential features of the legal arrangements involved. This procedure will facilitate the recording and analysis of such documents. It will also enable detection of unregistered ancillary arrangements.

Sections 81(2) and (3) deal with the extent to which information registered under 81(1) will be available to the public. While generally it is in the public interest that information relating to patent rights be freely available to all interested parties, in some cases it may be appropriate for information to be kept confidential. Rather than canvass these cases in the working paper, the proposed law leaves the issue of the extent of confidentiality to be settled when regulations are being prepared under s 81(3).

Section 81(4) is an enabling provision which will permit the Commissioner to include in the public records further information of public interest relating to individual patents. A similar type of provision exists under the UK patent law (s 9) whereby the Comptroller of Patents is authorized in the case of an improvement patent to enter an endorsement warning that use of the improvement invention may entail infringement of an earlier patent.

3 Effects of Registration -- 82

This section provides the benefits and sanctions for encouraging registration under s 81. It would be possible, of course, to encourage registration of documents relating to patent rights by making the continued validity of the patent dependent upon proper registration of all transactions. But such a penalty would be very severe. Instead, it is hoped that the provisions of s 82 will provide adequate incentive.

Section 82(1) is a standard provision found in most public register systems. The effect of this provision is to provide purchasers with a means of determining with certainty that

the person conveying rights has not previously effectively disposed of such rights by an earlier conveyance to another party. Where two transfers of the same right have purportedly been made, the first to register will actually acquire the right.

Section 82(2) is another standard provision which serves to limit the benefit of establishing entitlement by prior registration to bona fide purchasers who accept a transfer of rights without knowledge of an earlier transaction.

While ss 82(1) and (2) reflect a benefit arising out of registration, s 82(3) imposes a disability on unregistered transactions which is intended to encourage registration. Section 64(a) prevents damages from being recovered in an infringement action in respect of any period during which a party's interest in a patent was not properly registered under s 81. This type of penalty for failure to register has been proposed in the UK Consultative Document (pp 34-5 paras 109-112). But this type of penalty will only have effect where the patentee is concerned that infringement of his patent rights may be occurring.

Section 82(3) provides a further, more substantial penalty. The effect of s 82(3) will be to illegitimize any payments made under a licence or other type of agreement which is not properly registered. Since firms must justify all expenditures and receipts to their accountants, firms making payments under unregistered agreements will risk having such facts turn up on their balance sheets. There will also be the prospect that such payment will be disallowed as legitimate expenditures for tax purposes.

Section 82(3) should provide a substantial incentive for registration of all transfers of interests relating to patents.

4 Amendment of Registrations -- 83

This section is a standard provision for allowing disputed entries in a register to be corrected. The word adopted follows the proposal of the Ilsley Commission (part II s 3 p 40). Express provision for participation of the Commissioner in such proceedings does not appear in the corresponding s 54 of the present act.

5 Title and Interests in Patents -- 84

The discussion with respect to earlier ss 30(1)b, 32, 39, 60(4) and 77, has outlined the policy by which any person having an interest in an invention will be able to pursue and obtain patent rights. Section 84(1) affirms this policy and also reserves rights between all persons having a beneficial interest in a patent. In effect, legal title to a patent may be exercised independently and without prejudice to any trusts which may be imposed on persons holding such rights.

Section 84(3) affirms that the Federal Court will be the exclusive forum for disputes respecting such claims. Section 84(2), corres-

pending to present s 33(2), deals with the special issues relating to the right to control application procedures.

6 Joint Ownership of Patents -- s 85

Section 85 deals with the characteristics of joint ownership of patents. While this issue has not been expressly settled under Canadian jurisprudence, considerable law on the subject exists in the United States. Sections 85(1) and (2) adopt the policy reflected in s 262 of the US code, that any person who is a joint owner of a patent (ie a joint inventor) is entitled to use and authorize use of the invention by others. This procedure seems preferable to the alternative of allowing one of several joint inventors to lock up or veto licensing of an invention if the policy of requiring unanimous consent were adopted.

Section 85(3) completes the policy discussed earlier with respect to s 14(4) and (5) by which several patents for similar or identical inventions may be allowed to issue (supra p 188). The reference to "or otherwise" in this section contemplates the inevitable occasional error by the Patent Office where, by oversight, an earlier patent for the same invention is not discovered in the search of the prior art. This type of error has occurred in the past (cf Re Fry (1940) 1 DLR 361). Until the improperly granted patent is revoked, a licence under it will protect the licensee from liability under any other patent.

7 Rights of Employees in Inventions -- s 86

This section deals with the difficult issues relating to employed inventors and, to employees who make inventions. The employed inventor is the man who is hired, at least in part, because of his potential for providing the services of creativity for his employer.

The situation faced by these types of inventors has generated special concern. The common law has developed definite rules for allocating ownership of inventions between employees and employers in the absence of an express agreement between the parties. These principles are, however, based on case law, and are difficult to identify without expert legal advice. Furthermore, many employees and particularly employed inventors are presently required by their employers to assign away in advance any rights they may have in inventions that they may make. These invention assignment agreements often go beyond the common law provisions and transfer to employers the patent rights of employees in all inventions relating to the employers' business, irrespective of the scope of the employees' responsibilities.

The employee who is a potential inventor is in a difficult situation. Not only is he unaware of the background principles of the law respecting ownership of inventions between master and servant, but he is in a weak bargaining position when presented with a

'boiler plate' employment contract at the time he commences his employment. The argument that employed inventors are rewarded through their salary can lead to apparent inequities in the case of truly significant inventions and is dependent, in any event, upon the continued gratuitous appreciation of the employer in continuing the employment relationship.

Various schemes have been proposed or implemented to assist employees who make inventions. The Banks Committee canvassed the issue and came to the conclusion that the only special feature that should be introduced into the UK law would be a prohibition against contracts which divest employees or more rights than they would retain at common law (para 469 p 139). The UK white paper, however, indicated that the government would entertain further proposals for a statutory award scheme that would be fair to both employees and employers (p 10).

A statutory scheme guaranteeing appropriate compensation for employees who make inventions has been apparently operating successfully for some time in the Federal Republic of Germany*. In the US, a judicially created concept of 'shop right' has developed by which employees retain ownership of employment-related inventions but subject to a right for the employer to use the invention in association with his business without obligation to make royalty payments.

An attempt to moderate the all-or-nothing alternative for allocating ownership of inventions was introduced into the UK Patents Act in 1949, by giving the Comptroller jurisdiction to apportion the benefit of an invention between employee and employer (UK Act s 56(2)). This provision was, however, narrowly interpreted by the courts and the Banks Committee recommended its repeal (para 469 p 139).

Most recently WIPO, in the course of its work in developing new models for developing countries, has proposed a new scheme for discussion purposes only, directed to ensuring that employees who propose innovative solutions to technical problems are adequately rewarded.**

Under the WIPO provisions employees who make a proposal for a solution to a specific problem in the field of technology within the sphere of the employer's enterprise would be entitled to receive an 'innovation certificate' from the employer. A certificate would only be available for proposals that fall outside the employee's scope of duties.

* Articles by Kurt Laude "Compensation for Employee Inventions in Germany", 44 JPOS 772 (1962); and "Employee Inventions Under German Law" 54 JPOS 807 (1972) by Schmied-Kowarzik

** "Draft Model Provisions on ... Innovations" WIPO doc WG/INV/III/1, July 30, 1975, Annex C, ss 401-408.

After issuance of the innovation certificate, an employer would be required to give the employee notice within one year of any intention to use the invention and actually commence use within a further six months. Failing such notice, the employer would lose all statutory rights under the scheme to use the proposal without the consent of the employee. Where the proposal is actually adopted, the employee would be entitled to a remuneration based on a percentage of the material benefit of the proposal to the employer, for a period of five years.

Faced with such indefinite developments in other jurisdictions, the draft law proposes to establish a background against which potential changes in the law may be better understood in the future. This entails a partial codification of the present law and the introduction of a new scheme which will not involve any direct form of governmental supervision.

Section 86(1) establishes the background policy that an inventor, even if employed in a field relating to his invention, will be entitled to the patent rights associated therewith. Section 86(2) introduces the exceptions to the general rule established under s 80(4) that there can be no transfer of rights to future inventions. These provisions recognize that commercial necessity dictates that employers should be able to maintain and benefit from the intellectual endeavours of men employed for that purpose.

Section 86(2)a adopts the test developed under the common law, based on the scope of employment contemplated by the parties. Section 86(2)b allows that, where the nature of a man's employment is unclear, the employer may settle any uncertainty by obtaining the employee's consent in writing to the disposition of title. Section 86(2)b nevertheless requires that the inventions be "associated with his employment". This section also limits attempts to obtain control over postemployment inventions. The courts in the UK have already recognized that it is contrary to public policy to allow a person to assign indefinitely into the future all rights with respect to inventions that may subsequently be made.*

By establishing these provisions as part of the statutory law, both employees and employers will more easily be able to refer to the basic rights established between the parties. The right to enter into special contractual relations will, subject to the limitations of section 86(2)b, remain. Ultimately, if a genuine concern exists as to the disposition of employees' rights with respect to inventions, then employee representatives through the collective bargaining process should be able to establish the optimum compromise with employers.

cf Electric Transmission Ltd v Dannenberg (1949) 66
RPC 183 at 186.

The foregoing provisions will allow rights in inventions to continue to flow to employers in much the same manner as at the present.

Sections 86(3) - (5) constitute a special proposal for enhancing the position of employee-inventors and the prospects that their inventions will be given full opportunity to become successfully commercialized.

The scheme of these sections entails giving an inventor an opportunity to recover control over his own invention when his employer manifests disinterest in pursuing its commercial exploitation. The employee may recover his invention at two stages. By giving notice under s 86(3) he may force the employer to elect between release of the invention or the filing of a patent application. Even where an application is filed, the employer must under subsection 86(3)b take steps within three years to use the invention or lose the patent to the employee-inventor.

With this scheme in effect, employers will not be able to ignore and simply file away invention proposals by employees without risking loss of control over the invention. The employee, as inventor, will likely have the greatest interest in searching out a potential application for his invention if the employer fails to proceed. The system is self-regulating. If money passes to the inventor to purchase a waiver of rights under these sections, it will be based on the perceived importance of the invention. If the employer perceives the invention to be unimportant, then it will be up to the employee to establish the worth of his own invention.

Section 86(5) has been included in order to prevent employers from destroying the ability of the employee to acquire a patent through public disclosure of the invention. Such an act will give the employee an immediate right to apply for patent under the protection of s 16(1)a.

Section 86(6) excludes these provisions from applying to federal civil servants who fall under the Public Servants Invention Act. That act operates as a form of statutory contract between the federal government and its employees. In some respects, the system set out in ss 86(3) to (5) is already reflected in the provisions of that act which authorize the designated minister to abandon all rights in an invention to the public servant concerned (Public Servants Inventions Act s 8(1)). While the provisions of the Public Servants Invention Act may not parallel the features of the proposed patent law in other respects, no changes are being recommended in the absence of specific demands or a recognized need for change.

8 Grant of Rights Under Future Patents -- s 87

This section covers the other cases, apart from employees' inventions, in which an exception to the general prohibition

against transfer of rights in future inventions is recognized in view of commercial necessity.

The practice of requiring licensees to transfer rights in improvement inventions to the licensor seems to be well established. Statistics reflecting on this practice were cited earlier (supra p 80) based on the 1972 survey by Statistics Canada of licensing agreements and the results of the survey carried out by O.J. Firestone.

Various international organizations have also moved to condemn grant-back provisions as terms in licensing agreements. The Organization for Economic Cooperation and Development (OECD), in its recommendation concerning restrictive business practices, warned member countries of the harmful effects of patent licensing practices, including*:

- (d) .. grant-back clauses, unjustifiably requiring the licensee to assign or grant back to the licensor exclusively all improvements discovered in working the patents when the effect of the practice is to reinforce the dominant position of the licensor or to stifle the licensee's incentive to invent"

This highly qualified warning is limited to the grant-back of exclusive rights and would therefore extend to the grant-back of title to an invention. A more extreme proposal was contained in Decision 24 of the Commission for the Cartagena Agreement. That decision called for the elimination from agreements relating to technology and patents of a series of ten clauses, including:

"... clauses obligating the grantee to licence-back to the grantor improvements and inventions made by the grantee."**

Both WIPO in the proposed revisions to the 1964 Model Law for Developing Countries and UNCTAD in its Code of Conduct for the Transfer of Technology to Developing Countries have recognized that the grant-back control over an invention may be unduly onerous and undesirable.*** But the provisions of Decision 24 may go too far, in that patentees may be reluctant to licence their inventions where they will be unable to adopt improvements made by licensees.

* Recommendation of the Council Concerning Action Against Restrictive Business Practices Relating to the Use of Patents and Licences, adopted by the Council at its 348th meeting on January 22, 1970.

** Quoted from Bureau of National Affairs, Patents Trademarks and Copyright Journal no. 235, 3-7-75.

*** "Draft Model Provisions on...Licence Contracts.." WIPO DOC WG/ML/INV/I/2 September 5, 1974, s 62(2) vii; UNCTAD Doc TD/B/C.6/1, Annex III art 4.2 (27).

With the conflicting interests of patentees and licensees in mind, sections 87(1) and (2) permit patentees to insist in licensing inventions to licensees, on the right to use under nonexclusive licence any improvements made by the licensee.

Section 87(3) deals with the special case where two companies enter in a joint research project together. While there is a real danger that licensees will be forced to assign future rights under the guise of a research agreement, the existence of genuine joint research arrangements must be recognized. Section 87(3) has therefore been included in the expectation that any abuses will come to light through the registration requirements of s 81, the disclosure requirements of s 26, or by defecting licensees who decide to challenge the validity of a colourable agreement established under s 87(3). Abuses may then be dealt with as they arise.

9 Revocation Procedure for Licensees -- s 88

This section deals with the issue classically known as 'licensee estoppel'. Under the existing law a licensee is precluded from disputing the validity of his licensor's patent.* The theory which gave rise to this legal presumption has long been part of the common law respecting contracts. The law has always considered it undesirable to permit a party to a contract to repudiate his obligation simply because he is dissatisfied with the bargain he has made. Patent licence agreements often contain an express term precluding the licensee from challenging the validity of the patent being licensed.

Submissions were made before the Ilsley Commission, particularly by Thurman Arnold, to the effect that, with regard to licences under a patent, the principle of estoppel should be abolished (p 87). According to Mr Arnold's submissions, a licensee should be entitled under law to contest the validity of a patent at any time. If he were successful, he and all other licensees should be relieved of their liability to account for royalties, and in certain cases royalties previously paid should be recovered.

The Ilsley Commission incorporated provisions into its draft law protecting licensees from the principle of estoppel in compulsory licensing proceedings (part VIII, s 2(5) p 75). However, the proposal that licensee estoppel be abolished with respect to the impeachment of patents was rejected. The reason given was the concern that the enactment of such a provision might seriously deter licensing under patents (p 90).

* cf Fox "Canadian Patent Law and Practice", 4th ed, p 320.

However, in 1969 the US Supreme Court ruled that the doctrine of licensee estoppel should no longer be applied in US patent cases.* Following the line of this judicial initiative, provisions were incorporated into various proposals for revising the US patent law, particularly in the US Senate.

Bill S-2504 (s 296) would have entitled licensees to challenge the validity of the patent under which they have been licensed. These provisions have been maintained in the more recent bill, S-2255. In the interim, there has been no evidence that the licensing of patents has been falling off on account of the change in the law introduced by the US Supreme Court. Accordingly, the fear that patentees will be unwilling to grant licences if they are exposed to a revocation proceedings by licensees should be discounted as a basis for retaining licensee estoppel.

There are practical commercial reasons why a licensee should be entitled to challenge the validity of his licensor's patent. If a patent is of doubtful validity, it may arise that many infringers are refusing to assume licences. Under these circumstances, a licensee who has 'signed up' would be at a commercial disadvantage. The licensee would be burdened with paying royalties and he would be faced with competition from infringers who did not have to absorb such costs. Accordingly, s 88 of the proposed law would permit a licensee to extract himself from such a dilemma.

The scheme proposed under s 88 is to permit a licensee to make royalty payments into court pending an adjudication on the validity of the patent. If the patent is held valid, then the escrowed royalties would be turned over to the patentee and the licensee's obligation to pay royalties under the licence would continue. Of course the licensee would also be charged with whatever court costs are ordered by the judge.

On the other hand, if the patent should prove invalid, then, under s 71(2), the patent would be revoked as of the date of commencement of the proceedings for revocation. In this case monies paid into court would be turned over to the licensee and, pursuant to s 88(3) all future liabilities of the licensee would cease.

The concluding words of s 88(4) are intended to ensure that a licensee is not prejudiced by reason of an attempt to determine the validity of a patent under which he is licensed.

* Lear Inc v Adkins 395 US 653 (1969)

This provision has been introduced to supplement and clarify the provisions of the Federal Court Act respecting the jurisdiction of the Federal Court in patent matters. As indicated earlier (supra p 255) the Federal Court presently has jurisdiction under that act in all cases in which a remedy is sought respecting a patent. The corresponding provisions under the Exchequer Court Act (s 22) have been the subject of judicial comment and some doubt has been cast on the scope that must be attributed to these words on account of constitutional limitations.*

Without attempting an exhaustive analysis of the constitutional issues, s 89 has been proposed for inclusion in the draft law on the basis that the operation of the patent system would be well served by ensuring that the jurisdiction of the Federal Court extends to supporting the granting and enforcing of licences in respect of patents. If parliament has jurisdiction to create patent rights and to define the extent to which such rights may be licensed, then s 101 of the BNA Act would appear to authorize the creation of a court with jurisdiction to administer such provisions.** Section 89 has therefore been introduced with a view to supporting the voluntary licensing of patent rights by ensuring that a court with expertise in patent matters will be available to protect the interests of patentees.

This section does not affect the jurisdiction of provincial courts or the right of any patentee to apply to such courts to enforce the terms of any patent licensing agreement. It gives the Federal Court concurrent jurisdiction in a manner similar to that created under the Federal Court Act in respect of claims arising out of any agreement relating to the carriage of goods in or on a ship (s 22(2)i) or contracts respecting marine insurance (s 22(2)r) passed in pursuance of the federal power over navigation and shipping. By providing patentees with a single federal arena for enforcing patent licence agreements the proposed law will advance the object of encouraging the voluntary licensing of patent rights and therefore the early dissemination of new technology.

* McCracken & Concrete Pipe Ltd v Watson (1932) Ex CR 83
Kellogg Co v Kellogg (1941) SCR 242.

** s 101 "The Parliament of Canada may, notwithstanding anything in this Act, from time to time provide for the ... establishment of any additional courts for the better administration of the laws of Canada."

This section applies to a confused and uncertain area of the law, namely the procedures governing the enforcement of judgment debts insofar as they apply to patent rights.

At common law, a patent was not subject to seizure and sale by a sheriff under the standard execution procedures used to enforce judgment debts. This legal limitation was based on the theory that a sheriff could only sell that which he could seize, and since patent rights have no corporeal, tangible substance, they could not be subject to execution. Apart from the normal execution process the courts have always maintained an inherent power to appoint a receiver as a form of equitable execution. A receiver, in effect, stands in the shoes of a judgment creditor and has power to exercise all of the debtor's rights in order to recover sufficient revenue to satisfy a judgment debt. The courts have, however, been reluctant to exercise this jurisdiction out of a traditional caution generally associated with the use of special equitable powers.*

Perhaps in view of this traditional reluctance, two provinces in Canada have passed special legislation authorizing sheriffs to seize patent rights under execution.** The Ontario provisions were apparently originally adopted on the basis that patent rights were analogous to rights in shares and dividends.***

If the seizure of rights held by a patentee were limited to the royalties due or accruing under patent licences, then the provisions of the Ontario and Saskatchewan Execution Acts would have little potential for interfering with the general scheme of the Patent Act. However, to the extent that these provisions purport to authorize the seizure of all the rights available to a patentee under a patent, certain problems potentially arise.

Assuming that a sheriff were to 'seize' the rights of a patentee under his patent, would that seizure operate to deprive the patentee of the right to use the invention? Would a seizure by a sheriff in Ontario have any effect on the rights of the patentee in other provinces? Would the sheriff have the ability to issue licences or the duty to resist compulsory licence applications?

Under the statutory provisions referred to, the sheriff is given express power to eventually sell such rights. While no case has apparently arisen where a sheriff has purported to restrain a

* cf Edwards & Co v Picard (1909) 2 KB 903; and Toronto Dominion Bank v CarTree International Ltd. (1967) 53 CPR 271 (Saskatchewan).

** Ontario - RSO 1970 152 s 17; Saskatchewan - SS 1969 C 18 s 2.

*** Statutes of Ontario 1903, 3 Edw VII c 7 s 17.

patentee from using a patented process or manufacturing a patented product, the possibility of such an interference arising would be inherent in the event that such rights were actually sold to a third party.

Problems relating to the priority of seizures and assignments could also arise. According to the statutory provisions of the provincial legislation the interests of the patentee as a judgment debtor are supposedly bound from the time that a notice is given to the Patent Office. From time to time such notices are actually received by the Patent Office. Since the provincial statutes have no authority over officials within the Patent Office, these letters are simply placed on the correspondence files of the patents to which they relate.

On the other hand, s 53(4) of the present act specifically governs the priority of any assignment of a patent and provides for the entry of such transactions in the registers of the Patent Office. These provisions will be continued under the proposed law (s 81). It is possible, therefore, that the provisions of the provincial legislation and the federal patent law could come into conflict.

In order to remove the potential for such a conflict and in order to provide a more flexible and better organized system for attaching the interests of patentees who are subject to judgment debts, s 89A grants exclusive jurisdiction to the Federal Court to appoint a receiver to exercise the rights of a patentee. By including these provisions in the proposed law, the patent rights of judgment debtors will stand on an equal footing with other assets and property rights and will be made available to satisfy the entitlements of judgment creditors. The scheme of s 89A, however, will ensure that such rights will be enforced with a minimum of interference to the interests of patentees and the scheme of the patent law. Under s 89A(4) the receiver will be entitled to issue licences or even transfer the patent, if the court so approves. At the same time, the patentee will have the opportunity under s 89A(5) to continue manufacturing, thus preventing undue hardship arising from the loss of the right to carry on business. By granting the federal courts exclusive jurisdiction over such procedures, the potential for conflict with various provincial proceedings will be eliminated.*

With a single judicial authority involved in such matters, a consistent judicial policy for supervising the activities of such receivers can be established for all of Canada. Constitutionally, on the basis of the considerations discussed with respect to s 89 (supra p 281), this section can be justified as ancillary legislation in legitimate support of the operation of a federal patent system.

* The potential for such a conflict has been recognized by the US Supreme Court - cf Stevens v Gladding 17 How 447 (1854).

CHAPTER 9 -- ADMINISTRATION

This chapter deals with the establishment of the Patent Office, the Commissioner of Patents, and such further technical provisions as are necessary to facilitate the implementation of the patent law. This includes provisions respecting the activities of patent agents and other persons commercially involved in the exploitation of inventions or patent rights.

1 Establishment of the Patent Office and the Commissioner of Patents -- ss 90 and 91

Sections 90 and 91 follow the structure of the present law in providing for the establishment of a Patent Office and the appointment of a Commissioner of Patents. The reference in s 90(1) to "agency" has been added to provide the government with the flexibility to attach the Patent Office to a separate bureau or crown agency rather than under a government department if the government should choose to do so. Further, the scheme of these two sections and, as well, other features of the proposed law, result in a drafting structure for the proposed law that differs somewhat from that existing under the present act.

Under the present Canadian patent law many procedures and activities are attributed to the Commissioner of Patents. Some are merely administrative and may therefore be delegated. Others are quasi-judicial responsibilities which require the personal involvement of the Commissioner. Unfortunately, the distinction between these two types of activities is, in many cases, unclear throughout the present legislation.

By way of example, references to various activities which are assigned to the Commissioner throughout sections of the present Patent Act are listed as follows:

- s 11 the Commissioner shall inform (applicants whether certain applications are pending);
- s 16 the Commissioner may refuse to recognize (persons as patent agents);
- s 20(2) the Commissioner is to determine (the amount of crown compensation);
- s 20(6) ...(secret applications) shall be placed in a packet sealed by the Commissioner;
- s 22 applications that, in the opinion of the Commissioner (relate to atomic energy) shall be communicated by the Commissioner to the Atomic Energy Control Board;
- s 31 ...(applicants may nominate representatives) within such period as the Commissioner may allow;

s 31(2) ... (nominated representatives) shall be recorded as such by the Commissioner;

s 31(4) ... (new appointments may be supplied) within such periods as the Commissioner may allow;

Examples of other sections in the present law that expressly refer to duties which are assigned to the Commissioner include ss 32, 33(2), 38(2), 39(1), 39(3), 40(1), 41(3), 41(4), 42, 43, 45(2), 45(3), 45(7), 45(9), 47, 53(3), 66(1), 68a, 68b, 70(2), 71(2) and 71(3).

In considering the above list of responsibilities assigned to the Commissioner, doubtless no applicant would object if such procedures as a s 11 response, the sealing of a secret application under s 20(6) or the dispensation of the requirement for drawings under s 39(3), for example, were carried out by employees within the Patent Office. On the other hand, it is quite possible that objections could arise if the Commissioner were to assign to other persons the activities of fixing compensation for licences under ss 41(3), (4) or 68; a decision under s 33(2) to allow one of joint applicants to proceed against the objection of another joint applicant; a decision under s 42 to refuse an application, or a decision under s 45(7) as to the prior inventor in the case of a conflict. All these decisions would, under the present act, be made by the Commissioner. Of course, he would usually do so taking into account the advice of members of the Patent Office staff. But the Commissioner would, in every case, personally review the relevant issues and make the requisite decisions. This distinction is not, however, clear on the face of the present act.

In order to avoid confusion as to the actual procedures which, under the proposed law, must be carried out by the Commissioner, the various steps in the granting of patents and other procedures under the act are allocated either to the Patent Office, the Commissioner in his personal capacity, or the Patent Authority. Accordingly, under s 90(2) the Patent Office is assigned the responsibility of carrying out those functions assigned to the Patent Office under the act. These would include those cases where express reference is made to responsibilities of the Patent Office, (ie the publication of applications under s 40(1); the reception of applications under s 42(1); the reception of instruments effecting transfers of rights in patents under s 81(1); the dissemination of technical information under s 90(2); and all matters assigned, under the authority of s 91(3) by the Commissioner of patents, to be carried out by the Patent Office.

While throughout the proposed law the Commissioner is given responsibility to ensure that appropriate steps and proceedings are carried out, where it is intended that the Commissioner shall have power to assign responsibilities to the Patent Office and its staff the proposed law follows a form of expression by which the Commissioner 'causes' specified things to occur.

For instance, under s 42(1) the Commissioner is required to "make provisions for the reception and examination of applications" within the Patent Office; under s 41(4) the Commissioner "shall cause the applications... to be kept in secrecy"; s 43(5) allows that the Commissioner "may... provide (for the introduction of further evidence) in intervention proceedings"; s 43(7) states that the Commissioner shall "make provision for the preparation and delivery of written reasons" regarding the disposition of intervention submissions. And where a patent application is found to be allowable by the appropriate examining staff within the Patent Office, the Commissioner "shall cause a patent to be granted" according to s 44(4). In this manner it is hoped that no question should subsequently arise as to the validity of any step taken within the patent office without the personal involvement of the Commissioner.*

Dealing now with the actual provisions of ss 90 and 91, it should be noted that s 90(2) explicitly assigns to the Patent Office an information-dissemination responsibility. This provision will ensure that, in the future, the Patent Office has statutory authority to allocate funds to provide an information service. The importance of the dissemination of technical information was one of the major themes of the Economic Council's report and is recognized under the list of objects for the proposed patent law (s 3(1)e).

The provisions in s 91(1) that the Commissioner shall exercise his powers "under the direction of the minister" follows the wording of s 63(2) of the Trade Marks Act rather than s 4(1) of the existing Patent Act. This wording better reflects the independence of the Commissioner. The appointment, as well, is changed from one made by order in council to one made pursuant to the Public Service Employment Act.

The powers of the Commissioner are particularized under s 91(4) and (5) in accordance with the provisions of present s 4(2). Section 91(6) is new in that it gives the Commissioner complete discretion to refer an issue of fact to be decided by the Federal Court. Under the present Patent Act, s 71(3) allows the Commissioner, with the approval of the minister, to refer compulsory licensing proceedings, or any issue of the fact arising therein, to the Federal Court. Since s 91(6) is restricted to issues of fact, the approval of the minister will no longer be a necessary requisite.

Section 91(7) is a reproduction of s 25 of the present act.

2 Seal of the Patent Office and Evidence in Legal Proceedings -- s 92

Sections 92(1) and (2) follow generally the wording of present s 13. The introduction of the qualification in s 92(1) that

* Some provisions of this type already appear in the present law. For instance, see ss 13, 15(2), 27, 50(1), 53(2) and 74(1).

the sealing of documents is subject to regulations is intended to allow for the dispensation of sealing of patents generally, if this should be decided to be appropriate in the future.

Section 92(3) is a new provision. While incorporation of a prima facie or rebuttable presumption of truth respecting Patent Office records may be redundant in view of the provisions of the Canada Evidence Act (RSC 1970 c E-10, s 26), such a provision already exists under the present Copyright Act (RSC 1970 c c-30, s 36). Section 92(3) permits, however, admission of copies of Patent Office records before the courts under the seal of the Patent Office, without the requisite affidavit by a member of the Patent Office's staff, as would be required under the Evidence Act.

Section 92(4) continues the convenient provision existing under present s 14. This section permits court hearings to proceed on the basis of apparently certified copies of foreign patent office documents without the necessity of proving the genuine character of the certificate. Of course, it will still always be possible to impugn fraudulent documents.

3 Patent Office Records and Publication of Information -- s 93

This section governs the nature of the records which are to be kept by the Patent Office. Under s 93(1) the expression "Register of Patents" is avoided and the nature of records to be kept is, under s 93(2), governed by regulation, thereby allowing a maximum of flexibility with respect to future Patent Office information storage systems. The intention is to ensure that there will be no statutory barrier to adoption of the most modern information systems as may become available.

Sections 93(3) and (4) deal with the extent to which the records of the Canadian Patent Office are to be available to the public. Following the provisions of present s 10, the public are given a statutory right of access to the records listed. This list may, under s 93(4)d, be extended by regulations. Section 93(5) ensures that the public has a further statutory right to obtain copies, subject to an appropriate fee, of any documents available for public inspection at the Patent Office.

4 Duties of Officers and Staff of the Patent Office -- ss 94 & 95

Under the present statute, present sections 5 and 6 expressly refer to the creation of the position of Assistant Commissioner and the appointment of principal examiners, examiners, associate examiners and assistant examiners, etc. Under proposed s 94(1) all staff within the Patent office under the Commissioner will be appointed in accordance with the Public Service Employment Act. While the Commissioner may doubtless continue to retain a senior officer who will act as his assistant, s 94(2) will allow flexibility as to the appointment of a person to serve as Acting Commissioner in the event of the absence of the Commissioner.

Section 95(1) follows present s 7 in restricting the right of employees within the patent office to deal in invention rights. Section 95(2) is a new provision which, while possibly redundant in view of the oath of secrecy required under the Public Service Employment Act, is intended to reassure members of the public that their communications with the Patent Office will be maintained in confidence. This may become of particular importance where, under the laws of foreign countries, inventors lose the right to apply for a patent if any disclosures of their inventions have been made other than in confidence. In the event that a Canadian patent applicant abandons his first Canadian filing, s 95(2) may assist in foreclosing objections in foreign jurisdictions that his invention has been disclosed in conversations with Patent Office staff.

5 Amendment Within the Patent Office to Correct Clerical Errors -- s 96

This procedure, by which the records of the Patent Office may be amended is a standard provision already existing under s 8 of the present law. It is developed in greater detail under s 96, following the proposals set out in the report of the Ilsley Commission (part III ss 3 and 4). It is appropriate to give interested persons a statutory right of notice as provided under s 96(4) whenever an amendment of apparently clerical nature is proposed to be made since it is always possible that provisions which at first appeared to be 'clerical', may turn out to have substantive significance.

6 Regulation of Patent Agents and Services Respecting Inventions -- ss 97 and 98

These sections deal with the regulation of those persons engaged in various activities respecting the preparation, filing and prosecution of patents for inventions and other commercial activities related to assisting inventors in the exploitation of their ideas.

The provisions under the present Patent Act respecting patent agents are relatively short and give little guidance as to the manner in which the practice of this profession is to be subject to supervision. Present s 15(2) provides that recognition as a patent agent is to be granted in accordance with regulations made by the Commissioner with the approval of the Governor in Council. Present s 16 gives the Commissioner power to suspend such recognition "for gross misconduct or any other cause that he may deem sufficient".

While extensive provisions governing patent agents exist under the present rules (viz 130-145), detailed standards of professional responsibility are not set out therein. The rôle played by patent agents in drafting patent documents will determine the scope of rights of inventors under patents. Accordingly, the activities of such persons is of such importance that extensive provisions respecting the regulation of their activities has been included in the proposed law.

Section 97 provides for recognition of persons now known as 'registered patent agents' in accordance with procedures to be established by regulations. Section 97(3) makes express provision for the disposition under future regulations of the issue of whether a corporation or partnership should be entitled to recognition as a registered patent agent. This question was reviewed in considerable detail in the report of the Ilsley Commission (pp 120-122). Some suggestions have been made within the legal profession in Canada that lawyers should be entitled to incorporate to assist them in the structuring of their financial affairs. Section 97(3), unlike the proposals of the Ilsley Commission, would leave open the possibility that corporations might be entitled to recognition as patent agents at some future date. Further, statutory authority is given so that the status of partnerships can also be clarified under regulations.

Section 97(5) is intended to indicate the scope and type of regulations which might be passed governing persons recorded under this section. Again, it must be emphasized that such regulations need not necessarily be passed immediately. Rather, the intention is to establish a statutory authority for the creation of such regulations, leaving discussion as to the nature of regulations for a later date.

The present act is deficient in that, while the right to practise before the Patent Office is only available to registered patent agents, no express prohibitions exist against the provision of the services of preparing applications for subsequent filing under the name of an inventor. The Commissioner of Patents has indicated his concern in this respect through a notice in the Patent Office Record of April 1, 1975 (p xi). In that notice the Commissioner invited submissions from patent agents on the propriety of procedures whereby registered patent agents accept instructions from persons (other than applicants) who are themselves unauthorized to practise before the Patent Office. Various submissions received have indicated that there is real concern that such practices may be taking place to the detriment of inventors whose applications are, in reality, being prepared by persons who have not demonstrated their qualifications by successfully passing the requisite Patent Office examination procedures. As indicated earlier, the preparation of patent documents is a crucial activity which will affect the validity and scope of rights which may accrue to inventors, both under the Canadian patent law and under the patent laws of foreign countries.

Concern has been growing in the United States that many inventors are being misled by invention-marketing developers who undertake to assist inventors for a fee in exploiting their invention rights.* In California a bill was introduced in 1975 to provide

* cf Article, Los Angeles Times, Wednesday, August 21, 1974 entitled "Firm Accused of Milking Inventors Out of \$1 Million"; the Wall Street Journal, November 30, 1973 "Caveat Inventor -- Concerns that Promise to Assist Gadgeteers Are Disappointing Many". In September, 1975, the US Federal Trade Commission

(continued)

legislation protecting consumers from fraudulent advertising and marketing techniques on the part of "invention development" firms.* This bill requires that certain mandatory disclosures be made by such firms; that such firms post a bond; it establishes a cooling-off period for contracts made with such firms and other specific restraints. The bill is not intended to interfere with the activities of legitimate promoters but rather to protect inventors from losing, through assignment or unsophisticated patent draftsmanship, a portion of their invention rights.

It is with these background considerations in mind that s 98(1)b has been drafted to extend beyond the scope of the present law to prohibit unqualified persons from assisting inventors, for compensation or reward, in the preparation of documents relating to patent applications. Sections 98(1)c and d extend the prohibitions of subsections (a) and (b) to the carrying out in Canada of the equivalent activities, for the purposes of obtaining patent protection in foreign countries. As has been indicated, such rights are equally or more important than Canadian patent rights and, accordingly, Canadian inventors deserve equivalent protection.

Section 98(1)e applies to activities outside the normal proceedings relating to obtaining patent rights. It is intended by this prohibition to make provision for possible future regulations requiring invention-marketing agencies operating in Canada to apply for recording with the Patent Office. While such agencies would not be given the status of registered patent agents for the purpose of carrying on patent office prosecutions, the intention is that, in the absence of registration, they would not be entitled to advise, for a fee, on the exploitation of patents or inventions.

While section 98(1) is a prohibitory provision, it is anticipated that, initially, registration requirements for certain classes of activities under s 98(1) might be nominal. However, in the event that complaints are received from members of the public, through the registration requirements a means will exist to establish substantive regulations as the need arises.

Section 98(2) is a conventional prohibition against misleading representations. While this prohibition may overlap in part recently-introduced prohibitions under the Combines Investigation Act*, s 98(2) goes further by prohibiting unauthorized persons from holding themselves out as available to carry on activities reserved to registered patent agents under s 98(1).

* (continued)

issued a complaint against a certain idea promotion firm - Bureau of National Affairs, 244 PTCJ A-6.

** California Assembly Bill 485 introduced January 15, 1975 by Assemblyman Bannai.

* Section 18, Bill C-2, "An Act to Amend the Combines Investigation Act" passed on third reading by the House of Commons on October 16, 1975.

Section 98(3) establishes a further activity which may only be carried on by registered patent agents or by qualified legal persons. This section applies to the provision of legal advice respecting the validity of a patent or questions of infringement. Through this section statutory recognition will be given to the competence of registered patent agents to evaluate the issues of validity and infringement as a service for clients. Such services are regularly given today and no question should exist about the right of patent agents to do so in view of the fact that, prior to the grant of a patent, they are exclusively qualified to assist their clients in arguing questions of patentability before the Patent Office. The reference to barristers and solicitors under s 98(3) is intended to assure that this provision does not interfere with the usual rights of lawyers recognized under provincial law to give legal advice.

As a corollary to s 98(3), s 98(4) extends the customary solicitor-client privilege arising with respect to communications with a lawyer to encompass communications between members of the public and their registered patent agents covering the issues of validity and infringement of a patent, and as well, compulsory licence proceedings.

The Patent and Trademark Institute of Canada (PTIC) has made express representations to the government indicating that, in their view, it would be desirable to clarify the extent to which communications between patent agents and their clients should be entitled to legal privilege. The PTIC suggests in its submission that patent agents, in advising their clients as to rights under the Patent Act, are in much the same position as solicitors in court proceedings. Accordingly, they recommend that a legal privilege should be established extending to the preparation and prosecution of patent applications, as well as to communications between a person and his patent agents made in contemplation of court proceedings.*

In making this proposal the PTIC cites from a standard legal text the basic rationale for the principle of legal privilege as follows:**

* The Institute proposed that the following draft section be placed in the Patent Act:

(1) The professional privilege that applies to communications between a solicitor and his client when the solicitor is acting as such, and the privilege that applies in contemplation of litigation between a solicitor and others on behalf of his client, shall be deemed to apply to a patent agent when acting as such.

(2) In this section "patent agent" means a person or firm whose name is entered on the register of persons and firms entitled to represent applicants in the presentation and prosecution of applications before the Patent Office.

** Phipson On Evidence, 11th edition, p 586.

"The rule is established for the protection of the client, not of the lawyer; it is founded on the impossibility of conducting legal business without professional assistance, and on the necessity, in order to render that assistance effectual, of securing full and unreserved intercourse between the two."

It must be noted that the proposal of the PTIC is to establish legal privilege not with respect to litigious proceedings before the courts or compulsory licence proceedings, but rather only in proceedings before the Patent Office in anticipation of the grant of a patent.

Cases have arisen both in the United Kingdom and in Canada in which claims to legal privilege for communications between a man and his patent agent have been rejected.* On the other hand, the common law in the United States on this point can only be described as fluid.**

The situation in the United States is somewhat confused by the fact that a large number of patent practitioners are, in fact, qualified as attorneys at law.

On the other hand, statutory provisions have been introduced in the United Kingdom and under the Australian Patents Act which establish legal privilege with respect to communications between patent agents and their clients.***

Taking these background facts into consideration, the proposed law under s 98(4) creates a privilege with respect to communications with patent agents on questions of validity or infringement of a patent or associated with licensing procedures under the act. This is a narrower form of privilege than that proposed by the Patent and Trademark Institute of Canada, or existing under the UK or Australian laws.

It is proposed to create a privilege on the principle that the fundamental object of legal privilege is to ensure persons that they have recourse to legal advice when they wish to extricate themselves from a possibly detrimental legal situation. According to this view, under the provisions of s 98(4) no privilege will arise in respect to steps taken to obtain the grant of a patent.

* Moseley vs Victoria Rubber Co. (1886) 3 RPC 354; McKercher vs Vancouver Iowa Shingle Co. (1929) 4 DLR 231, 2 WWR 287. See also the New Zealand case Gain Milking Co. v MacEvans & Co. (1914) 33 NZLR 1008 to similar effect.

** See the review of authorities on attorney-client privilege in Eutectic Corp vs Metco Inc (1973) 180 USPQ 570 and the article by B.W. Sandt entitled "Privilege and Corporate Patent Solicitation" 56 JPOS 439.

*** UK Civil Evidence Act, 1968, s 15; Australian Patents Act, 1952-1966, s 134(1A).

Applicants for patents and their agents are expected to deal with the Patent Office in utmost good faith. The proposed law contains extensive provisions reflecting the obligation of applicants to make full disclosure before the Patent Office.* A person seeking grant of a patent is not in the same position as a litigant who, if he investigates his own case thoroughly, may produce or communicate facts fatal to his cause. A patent applicant is not in need of privileged access to legal advice in order to assess his plight.

A similar concept has been suggested with respect to legal privilege arising from communications with a lawyer. In the case *Susan Hosiery Ltd v the Minister of National Revenue* (1969) 2 Ex CR 27, President Jaccett** observed, by way of example, that where a solicitor orders a survey of land for the purpose of preparing a contract, the information arising from such survey would not be privileged. This would be an example of a situation where no need arises for the client to have access to a lawyer in order to extricate himself from legal difficulties. By analogy, a patent applicant does not need the protection of legal privilege when he requests his patent agent to apply for a patent on his behalf.

Section 98(4), in defining the nature of the legal privilege granted, adopts by reference the privilege existing under the laws of various provinces of Canada respecting communications with, by or for lawyers. Ideally, it would be preferable if the proposed law were to codify the nature of that privilege. Attempts have been made to define the nature of solicitor-client privilege***. However, the common law would appear to be still in a state of development. It is not completely settled whether privilege applies only with respect to communications, or extends as well to facts obtained by a legal advisor or by a client in the course of preparing a case for litigation. Privilege accruing to this latter type of information is described under US law as protecting a litigant's "work product".**** Accordingly, s 98(4) adopts by reference the existing type of privilege recognized in respect of communications with lawyers in order to incorporate further jurisprudence as it develops as part of the patent law.

* See s 42(4)e for disclosure requirements and s 71(1)d and e respecting failure to make proper disclosures.

** Now Chief Justice, Federal Court of Canada.

*** Under the Income Tax Act, RC 1970 c I-5, s 187 defines this privilege as: "...the right, if any, that a person has in a superior court in the province where the matter arises to refuse to disclose an oral or documentary communication on the ground that the communication is one passing between him and his lawyer in professional confidence..."

**** cf Hickman v Taylor (1947) 329 US 495, US Supreme Court.

This section substantially follows the provisions of s 31 under the present Patent Act. The object of these provisions is to require foreigners to establish a Canadian address for all correspondence with the Patent Office and for purposes of service in legal proceedings. The penalty for noncompliance with the designation requirements of this section is the suspension of any entitlement to receive damages in respect of infringements arising during a period of default (cf s 64(b)).

Section 99(1) requires the appointment of a person registered under s 97 rather than simply an address for service in Canada, as presently allowed under existing s 31. This change is considered desirable since persons recorded under s 97 may be required by regulations to keep proper records of those whom they may represent. Such control would be impossible or impractical if patentees were to nominate other persons or bodies such as banks.

The presumption of proper legal service established under s 99(2) arises against all persons having an interest in the patent. This would include persons holding liens or licences with respect to the patent. These persons, in order to ensure that they will receive notice of any proceedings affecting the patent, will have to contract with the patentee for the right to be notified of any proceedings affecting their interest.

Sections 99(3), (4) and (5) govern the procedure for changing the designated representatives or dealing with a situation where there is a failure to designate a representative. Section 99(3) departs from the provisions of present s 31(3) by making it mandatory for an applicant or a patentee to advise the Patent Office as soon as there is a change in the name or address of the latest recorded representative.

CHAPTER 10 - PROHIBITIONS AND OFFENCES

This chapter defines certain activities which are explicitly prohibited. The distinction between a prohibition and an offence, for the purposes of this chapter, is that criminal penalties will apply with respect to offences; prohibitions will only be enforced on the initiative of interested persons.

1 False Marking and Advertising -- s 100

Section 100(1) replaces present ss 78(a) and (b). The intention is to prohibit representations by infringers to potential purchasers that a patented product has been made under licence from the patentee. While such false representations may also be covered by provisions under the Combines Investigation Act, this prohibition is included in the proposed patent law in view of the civil remedies available to patentees under s 100(3). Section 100(1) is extended to cover persons applying for a patent as well as patentees, since exhaustion will arise with respect to goods sold by a person who subsequently acquires a patent, whether sold before or after the patent is granted.

Section 100(2) replaces present s 78(c). The new section, however, extends to advertising and, as well, to false representations that a patent application is pending. This section is subject to subsequent criminal sanction under s 102(3).

Section 100(3) provides a right of civil remedy, using s 53 of the present Trade Marks Act as a model. In s 100(3) the Federal Court is given exclusive jurisdiction, following the earlier arguments (supra p256) regarding the desirability of restricting patent proceedings to a single court in order to sustain judicial expertise in the field of intellectual property.

2 Remedy for Groundless Threats -- s 101

This is a new provision for inclusion in the Canadian patent law. It deals with the case where a person, claiming that he has valid patent rights, intimidates other persons into withdrawing from a commercial activity alleged to be subject to patent restraints. Under such circumstances, other persons who may have been dependent on the commercial activities of the intimidated party may suffer considerable commercial loss. The purpose of s 101 is to ensure that such commercial loss is recognized as a legal wrong in cases where the allegations of infringement were unfounded.

Section 101 follows generally the provisions of s 65 of the present UK Patents Act. These same provisions appear to have been used as a model for the proposals of the Ilsley Commission (part XI, s 7, p 109).

Section 101 may appear, on first sight, to duplicate the provisions of s 7(a) of the Trade Marks Act. That section provides:

"7. No person shall

- (a) make a false or misleading statement tending to discredit the business, wares or services of a competitor;"

This section has been applied in Canada as providing grounds for compensation in cases where false threats of infringement have been made.* However, it applies only where threats have been made against a competitor. It does not appear to provide a remedy to a third party, not in competition with a threatening patentee, who is dependent upon goods being manufactured by an alleged infringer. Under such circumstances, s 101 would apply.

The provisions of s 65 of the UK Patents Act respecting threats were reviewed by the Banks committee. In that report it was proposed that the UK provisions be revised so that they would not apply in the case of threats made against persons manufacturing or importing articles which are alleged to infringe (para 275, p 78). This proposal was made out of concern for the dilemma of patentees who feel intimidated against giving warnings that their rights may be infringed. In this respect, s 101(3) assures that patentees will have the right to advise persons of the possibility that they may infringe by informing them of the existence of a patent. But the real issue is whether patentees should bear the burden of any loss arising from circumstances where they successfully intimidate people on the basis of claims to legal rights which, in fact, do not exist. It is with this consideration in mind that the exceptions proposed in the Banks Report have not been incorporated into s 101, even though they appear to have been endorsed in the UK government's consultative document (p 21).

Under s 101(4) the Federal Court is given exclusive jurisdiction in such proceedings for the reasons indicated earlier (supra pp 256 & 282).

3 Offences -- s 102

Section 102 prohibiting false representations is a reproduction of s 79 of the present Patent Act. The only change is that the amount of the maximum fine has been increased from \$500 to \$5,000. While 'fraud on the Patent Office' by applicants for patents is a ground for revoking a patent under the provisions of s 71(d) and (e), s 102(1) would provide a further criminal sanction. This section would apply not only to members of the public dealing with the office, but also to employees within the Patent Office.

* S & S Industries v Rowell, (1966) SCR 419, Supreme Court of Canada.

The prohibition against unauthorized practice established under s 98 is sanctioned by the criminal penalties allowed under s 102 (2). In the absence of any express provisions in the Patent Act, s 115 of the Criminal Code would apply. That section provides for a maximum punishment of two years imprisonment for the willful contravention of any act of parliament where no other penalty is provided. Inclusion of s 102(3) displaces the application of the Criminal Code provision and substitutes a more modest penalty.

From Study No. 15 prepared for the United States Senate Committee of the Judiciary, Sub-Committee on Patents, Trademarks and Copyrights by Fritz Machlup (footnotes omitted).

AN ECONOMIC REVIEW OF THE PATENT SYSTEM

II. HISTORICAL SURVEY

C. The Rise of an Antipatent Movement (1850-1873)

During the second quarter of the 19th century various groups pressed for the strengthening of the patent system and for its expansion. In Britain, they wanted patents made more easily obtainable and more effectively enforceable. In Germany a unified patent system was sought after an agreement of the Zollverein in 1842 had reduced the value of patents by permitting patented articles to be imported from member states. Petitions in Switzerland, partly inspired by German interests, asked for patent legislation. Provoked by such pressures and in line with the free-trade movement of the period, an antipatent movement started in most countries of Europe.

Parliamentary committees and royal commissions in Britain investigated the operation of the patent system in 1851-52, in 1862-65, and again in 1869-72. Some of the testimony was so damaging to the repute of the patent system that leading statesmen urged its abolition. A patent-reform bill, providing for stricter examination of applications, a reduction of the term of protection to 7 years, and compulsory licensing of all patents, was passed by the House of Lords.

In Germany several trade associations and chambers of commerce recommended abolition of the patent laws, the Kongress deutscher Volkswirte in 1863 condemned "patents of invention as injurious to common welfare"; the Government of Prussia decided to oppose the adoption of a patent law by the North German Federation; and Chancellor Bismarck in 1868 announced his objections to the principle of patent protection.

In Switzerland, the only industrial country of Europe that had remained without patent legislation, the legislature rejected proposals in 1849, 1851, 1854, and twice in 1863, the last time with a reference to the fact that "economists of greatest competence" had declared the principle of patent protection to be "pernicious and indefensible".

In the Netherlands the majority of the Parliament was convinced that "a good law of patents is an impossibility". The abolitionists won and, in 1869, the patent law was repealed.

D. The Victory of the Patent Advocates (1873-1910)

The tide turned in 1873, when the antipatent movement collapsed rather suddenly, after a most impressive propaganda campaign by the groups interested in patent protection. The following reasons have been given for the sudden change: the great depression, the rise of protectionism that came with it, the rise of nationalism, and the willingness of the patent advocates to accept a compromise.

The free-trade idea had been the chief ideological support of the antipatent movement: patent protection had been attacked along with tariff protection. Now, "thanks to the bad crisis", public opinion had turned away from "the pernicious theory of free competition and free trade" (Reichstagsabgeordneter Ackermann, opening the debate on the German patent bill in 1877).

The strategic compromise was the acceptance of the principle of compulsory licensing — of compelling all patentees to license others to use the invention at reasonable compensation.* This idea had been proposed in 1790 in the United States Senate, in 1851 in the House of Lords in Britain, in 1853 by a German official, in 1858, 1861, and 1863 at various conferences of British scientific organizations, and now in 1873 at the Patent Congress held at the Vienna World's Fair. The patent advocates and the free traders compromised on this general limitation on the patentees' monopoly power. (Despite the resolution of the Patent Congress, the actual adoption of compulsory licensing has been rather slow in some countries, and is still resisted in the United States of America.)

The defeat or disappearance of the opposition was reflected in the actions of the legislatures of several countries. In Britain the drastic reform bill that had passed the House of Lords was withdrawn in the House of Commons in 1874. In Germany a uniform patent law for the entire Reich was adopted in 1877. Japan, which had adopted her first patent law in 1872 only to abolish it again in 1873, enacted another law in 1885. Switzerland, more conservative than other nations, held out longer; a referendum in 1882 still rejected patent legislation, but a new referendum in 1887 enabled the legislature to pass a law. Patentability of inventions in the chemical and textile industries was limited by a requirement of mechanical models for all patented inventions. But this limitation was deleted from the law by an amendment in 1907, after Germany had threatened higher tariffs on certain Swiss products. The Netherlands, the last bastion of "free trade in inventions", reintroduced a patent system in 1910, to become effective in 1912.

* It was widely held that the compulsory-licensing compromise "saved the patent system". Paul Beck von Mannagetta, *Das neue Österreichische Patentrecht* (Vienna: Hölder, 1897), p 17. "They wanted to eliminate the objection that a patent granted a monopoly." Franz Wirth, *Die Patent-Reform* (Frankfurt a. M.: 1875), p 69, note 14, p 102.

FROM THE 1960 REPORT OF THE CANADIAN ROYAL COMMISSION
ON PATENTS OF INVENTION
(The Ilsley Commission)

Section 3. Should the Patent System be Maintained?

In the Second Interim Report of the Swan Committee the Committee said (para. 7) that in approaching the inquiry they felt it necessary to consider first the broad fundamental question whether the maintenance of "our patent system upon its present basis is justified as being still conducive to the attainment of those objects for which it was originally designed".

Para. 9 of the Second Interim Report is as follows:

"The theory upon which the patent system is based is that the opportunity of acquiring exclusive rights in an invention stimulates technical progress, mainly in four ways: first, that it encourages research and invention; second, that it induces an inventor to disclose his discoveries, instead of keeping them as a trade secret; third, that it offers a reward for the expense of developing inventions to the stage at which they are commercially practicable; and fourth, that it provides an inducement to invest capital in new lines of production which might not appear profitable if many competing producers embarked on them simultaneously. The history of industrial development seems on the whole to have justified this theory. Patent systems similar to our own have been adopted and are in operation in almost all industrial countries, and the general principles are embodied in the International Convention for the Protection of Industrial Property, to which every European country, except the Soviet Union, has subscribed, and to which many non-European countries, including the British Dominions, the United States of America, Brazil and Japan, also belong."

Then, after referring in para. 10 to the Soviet method of encouraging and rewarding inventors the Committee goes on in para. 11 to say, "We are in favour of the retention of the present system in this country," but expresses the opinion that there are several respects in which it can be improved.

A research study entitled "Some Proposals for Improving the Patent System" was prepared by Dr. Vannevar Bush at the request of the O'Mahoney Subcommittee. It is stated in the foreword of Dr. Bush's study (Study No. 1), that Dr. Bush's long association with the Massachusetts Institute of Technology and the Carnegie Institution of Washington, D.C., his achievements and experience in the fields of science, business and government, and his active participation in prior studies of the patent system made him uniquely qualified to aid the Subcommittee in its study.

Dr. Bush in his Study (p. 1) says that the patent system (of the United States) has three great objectives which he expresses as follows:

"First, it aims to stimulate both invention and the assiduous search for new applications of knowledge, which is the basis of invention. It does this by placing the inventor in a position to secure a reward.

Second, it seeks to create conditions whereby the venture of funds to finance the hazardous introduction into public use of new devices or processes will be warranted. This is done by protecting the industrial pioneer for a limited time against the uncontrolled competition of those who have not taken the initial financial risk.

Third, it aims to prevent the creation of an industry permeated by the intense secrecy with regard to its processes which characterized the medieval guilds and which can only retard the realization by the public of the benefits of scientific progress. This it does by extending a temporary monopoly to those who, in keeping with the American ideal of openness and frankness, will make a full disclosure of their new ideas so that they may be utilized to the full by those skilled in a particular art."

Dr. Bush goes on to say (p. 2):

"It [the patent system] worked well. This country has prospered beyond all others in the wide application of new techniques and in advanced industrial processes. Undoubtedly much of this was due to the width of the land in which great homogeneous markets were developed, and to the pioneering spirit of the people which could be applied as well to industrial as to geographic frontiers. Yet the patent system was largely responsible for the vigor of our small enterprises and for the effectiveness with which new things were promptly brought into use. Life was made more comfortable, healthy, and worth living for large numbers of our citizens."

And in addition to the three objectives expressed by Dr. Bush, a fourth is sometimes mentioned. This was briefly dealt with by G. M. Jarvis, legal adviser and Secretary of the Atomic Energy Control Board and General Counsel of Atomic Energy of Canada Limited, who appeared before us on behalf of the Atomic Energy Control Board and who pointed out that a patentee by enforcing his patent in effect compels those who would compete with him to develop a competing and different article, substance or technique. In other words, a patent of an invention compels competitors to "invent around" the invention. But it is not clear to us that competitive research of this kind is necessarily a good thing. The position taken by Fritz Machlup, Department of Political Economy, Johns Hopkins University, in a study which he prepared for the O'Mahoney Subcommittee (Study No. 15 p. 51) was as follows:

"The advantage is seen in the additional 'encouragement' to research. If the competitors were given licenses under the patent of the firm that won the race, they would have to pay royalties but would not be compelled to 'invent around' it. Exclusivity, however, forces some of them to search for a 'substitute invention'. But why should this be regarded as an advantage? The idea is probably that, if industrial research is desirable, more research is more desirable, and that it does not matter what kind of knowledge the research effort is supposed to yield. From an economic point of view, research is costly since it absorbs particularly scarce resources which could produce other valuable things. The production of the knowledge of how to do in a somewhat different way what we have already learned to do in a satisfactory way would hardly be given highest priority in a rational allocation of resources."

We think there is much to be said for this position. Reference, in this regard, and in regard to many features of and objections to the patent system may be had to an article by Sir Arnold Plant who is described by Fritz Machlup in Study 15 as "the most outspoken critic of the patent system in modern times". This article is entitled "The Economic Theory Concerning Patents for Inventions" and appeared in *Economics*, new series, vol. I (1934) pp. 30-51.

Apart from the question whether research cannot be overdone, that is whether some research may not be an uneconomic use of a country's resources, the question has arisen whether a patent system on the whole promotes laboratory research. Prof. Seymour Melman, a member of the Department of Industrial Engineering, Columbia University, who is said by Senator O'Mahoney in his Foreword to Study No. 11, presented by Prof. Melman to the O'Mahoney Subcommittee, to have had a longstanding, active and down-to-earth interest and experience in the subject of industrial productivity and research, says in that Study (p. 62):

"The patent system in the contemporary scene has not, as a rule, promoted conditions that facilitate research in science or the industrial arts. On the contrary: In universities the effect of patenting pressures has been to interpose managerial controls and commercial pressures where free, uninhibited inquiry is needed to promote the flow of science. In industrial laboratories research in the useful arts has been expanded rapidly, without a parallel growth in patenting activity. Moreover, the experience of a few firms, whose patent privileges have been recently abridged, indicates that these managements maintain and expand their industrial research in order to cope with problems of product and cost competition. The development of research in these and similar firms will bear close watching.

With or without a patent system, the efficient pursuit of knowledge in the universities and other nonprofit institutions will continue, within the limits of available resources, so long as the production of knowledge is treated as a sufficient end in itself. Industrial firms will continue to enlarge their research in the useful arts as dictated by competitive needs, with or without patent privileges. Henceforth, in the judgment of this writer, the main impetus for the promotion of science and the useful arts will come, not from the patent system, but from forces and factors that lie outside that system."

The Study was prepared by Prof. Melman after careful investigation and the passage quoted is the conclusion of Study 11 which purported to give the results of this investigation.

Study 15, by Fritz Machlup, to which we have referred, presents with great clarity the economic arguments for and against the patent system as a whole. We think the following passage from the section of the Study entitled "Concluding Remarks" (pp. 79, 80) is worth quoting:

"No economist, on the basis of present knowledge, could possibly state with certainty that the patent system, as it now operates, confers a net benefit or a net loss upon society. The best he can do is to state assumptions and make guesses about the extent to which reality corresponds to these assumptions.

If one does not know whether a system 'as a whole' (in contrast to certain features of it) is good or bad, the safest 'policy conclusion' is to 'muddle through'—either with it, if one has long lived with it, or without it, if one has lived without it. If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge of its economic consequences to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it. This last statement refers to a country such as the United States of America—not to a small country and not a predominantly nonindustrial country, where a different weight of argument might well suggest another conclusion.

It will be noted from this conclusion that the author of the Study intimates that different considerations might apply to a small country or a predominantly nonindustrial country. The position of Canada vis-a-vis other countries of the world is notable in one respect and that is the surprisingly large proportion of Canadian patents which are applied for on inventions made by inventors who are not residents of Canada.

Mrs. Editha T. Penrose in her book "The Economics of the International Patent System" published in 1951 in a footnote on page 111 gives a tabulation of the percentage of total patents granted to foreigners for various countries for the period 1930-37 unless otherwise indicated. This footnote is as follows:

"Most countries grant more patents to foreigners than they do to their own nationals. The U.S. Patent Office prepared the following figures for the Temporary National Economic Committee.

Percentage of Total Patents Granted to Foreigners for Various Countries

(1930-37 unless otherwise indicated)

United States	13.2
Germany	25.8
Great Britain (1930-35)	51.7
France	49.9
Italy	63.8
Canada	90.3
Switzerland (1930-36)	55.6
Japan (1930-36)	24.0
Czechoslovakia	76.1
Holland (1930-35)	80.9
Denmark	66.4
Norway	72.2

Hearings before the Temporary National Economic Committee, Part 3, p. 1152. See also a study by Mark Jefferson, 'The Geographical Distribution of Inventiveness,' The Geographical Review, v. 19 (1929), p. 650."

Mrs. Penrose in her impressive book says at pp.116-7 the following:

"Any country must lose if it grants monopoly privileges in the domestic market which neither improve nor cheapen the goods available, develop its own productive capacity nor obtain for its producers at least equivalent privileges in other markets. No amount of talk about the 'economic unity of the world' can hide the fact that some countries with little export trade in industrial goods and few, if any, inventions for sale have nothing to gain from granting patents on inventions worked and patented abroad except the avoidance of unpleasant foreign retaliation in other directions. In this category are agricultural countries and countries striving to industrialize but exporting primarily raw materials."

The foregoing suggests the observation that the economic advantages such as they are of dispensing with the patent system would be at least as great in Canada as elsewhere. Presumably, the research leading to the inventions made in the United States which are patented in Canada would not be diminished or altered in its character by the abolition of the patent system in Canada so long as the United States maintained its patent system. Similar considerations would likely apply to most other foreign inventions. If there were no patent protection in Canada, Canadians could use, royalty free, inventions patented abroad. This, however, might be in fact the sharing in what might be regarded as the fruits of patent systems elsewhere and benefiting from the free imitation of technologies developed abroad without sharing the cost of these benefits.

On the whole, we have come to the conclusion that even to Canada with its large preponderance of foreign owned Canadian patents the words in the concluding passages of Fritz Machlup's study apply—"if we did not have a patent system it would be irresponsible, on the basis of our present knowledge of its economic consequences, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it."

In coming to this conclusion one consideration has been the substantial number, though small percentage-wise, of Canadian residents who every year are granted patents and to whom, or to some of whom, the considerations quoted above from the Report of the Swan Committee and from the Study of Dr. Bush submitted to the O'Mahoney Committee apply.

We have given consideration to the question whether licences should not be compulsory under all patents, either immediately upon grant or at the expiration of a certain number of years after grant. This suggestion, with variations or modifications of the proposal involved, was fully discussed by the Swan Committee in its Second Interim Report, paragraphs 42 to 50 and 53. The Committee came to the conclusion that it could not recommend its adoption; paragraphs 49 and 53. Dr. Bush, in considering the same matter, says (p. 26)

"If licenses were to be compelled under all patents, it would be impossible for the small enterprises, which form the heart of the Nation's industrial strength, to maintain themselves. The principle of general compulsory licensing [we take it that he means compulsory licensing in all situations] is basically unsound. It would rob the country of the benefits which have in the past been substantially attributable to the patent laws. It is only in special situations . . . that the facts are such that the remedy of compulsory licensing may be used without attendant evil consequences."

The statement that "it would be impossible for the small enterprises . . . to maintain themselves" is, we think, too broad, but in our opinion it would be true of some small enterprises. As regards such small enterprises as presently rely on exclusive patent rights, much would depend upon the size of the royalty. But the prospect of attempting to build and maintain an enterprise on the basis of a patented invention which competitors, perhaps immensely large and well entrenched, would be entitled as of right to work upon payment of a reasonable

royalty might, we think, in some cases be sufficient to deter either the establishment or the continuance of the enterprise. There would be other possible disadvantages as well. The prosecution of research in Canada would to a certain extent, we think, be discouraged as the fruits of research by others would be available as of right upon payment of a royalty. This possibility we are prepared to contemplate and accept in the case of foods, medicines and surgical and therapeutic devices because in that connection there are other and, we think, more important considerations which are dealt with in Division XII of this report but we are not recommending that the principle be applied generally. But it should be possible to compel the patentee to grant licences in certain special situations which are fully dealt with below.

In coming down on the side of continuation of the patent system without any fundamental alteration of the right of a patentee to exclude others from making, using or selling the patented invention, we nevertheless recognize that the system possesses weaknesses and anomalies. These are well set out in the following passage from "The Sources of Invention" (1959), an interesting work written by John Jewkes, David Sawers and Richard Stillerman. At pp. 251-3 the following is said:

"It is easy enough to perceive the weaknesses, even the absurdities, of the patent system and the reasons why conflicting opinions as to its value are to be found. Its very principles are paradoxical. It is meant to encourage over the long period the widest possible use of knowledge, but it starts out by conferring upon the inventor the power to restrict to himself the use of that knowledge. It grants statutory monopolies but it arose out of an Act to curb monopoly. It flourished most vigorously in the nineteenth century, the great period of economic competition, and even now it is most robustly defended and embodies the most extensive monopoly rights in those countries which most tenaciously adhere to the competitive system of private enterprise. It is a crude and inconsistent system. It is based upon the assumption that the right and proper reward for the innovator is the monopoly profit he can extract in an arbitrarily fixed period. It offers the same reward to all inventors, irrespective of the intellectual merits of their inventions. It provides rewards for certain kinds of discoveries but usually confers no such reward for other kinds of discovery, such as scientific principles; commercial devices and institutions; biological knowledge; the arts of agricultural cultivation and textile processes; systems of ciphering; methods of teaching; chemical compositions and products. The standards of patentability, the patent period, the conditions attached to the patent have varied greatly from time to time in the same country and vary as between different countries.

The patent system lacks logic. It postulates something called 'invention' but in fact no satisfactory definition of 'invention' has ever appeared, and the Courts, in their search for guiding rules, have produced an almost incredible tangle of conflicting doctrines. This confusion has led to extensive and costly litigation. Its critics have described the patent right as merely 'something which has to be defended in the courts' and, because it may put the individual inventor at a disadvantage against the larger corporations, as 'a lottery in which it is hardly worth while taking out a ticket'.

The system, too, is wasteful. It gives protection for sixteen years (or thereabouts) whilst in fact over nine-tenths of the patents do not remain active for the whole of this period. It is dangerous in that the monopoly it confers can often be widened by its owner into fields and forms which it was never intended he should possess.

It is almost impossible to conceive of any existing social institution so faulty in so many ways. It survives only because there seems to be nothing better."

But we agree with what the authors at once go on to say:

"And yet for the individual inventor or the small producer struggling to market a new idea, the patent right is crucially important. It is the only resource he possesses and, fragile and precarious as his rights may be, without them he would have nothing by which to establish a claim to a reward for his work. The sale of his ideas directly or the raising of capital for exploiting the ideas would be hopeless without the patent."

FROM THE REPORT OF THE UNITED KINGDOM COMMITTEE
APPOINTED TO REVIEW THE PATENT SYSTEM
(The Banks Committee)

The Value of Patents

40 The President of the Board of Trade in his letter dated 13 July 1967 to the Chairman of this Committee, set out in the Preface, envisaged a thorough reappraisal of the whole patent system. We therefore endeavoured at the start of our deliberations to reach an understanding as to what was the real worth of the patent system.

41 Our predecessor the Swan Committee in its second Interim Report of 1946 discussed the theory upon which the patent system is based in the following terms: "... the opportunity of acquiring exclusive rights in an invention stimulates technical progress, mainly in four ways: first, that it encourages research and invention; second, that it induces an inventor to disclose his discoveries instead of keeping them as a trade secret; third, that it offers a reward for the expense of developing inventions to the stage at which they are commercially practicable; and fourth, that it provides an inducement to invest capital in new lines of production which might not appear profitable if many competing producers embarked on them simultaneously." To these observations the comment was added that "the history of industrial development seems on the whole to have justified this theory".

42 In recent years there has been some criticism of the patent system. It has been suggested that: firms, particularly some larger firms, are tending to bypass it; while the trouble and expense of obtaining a patent may be worthwhile for a major invention, it is not worthwhile for minor technical improvements; and the majority of patents which relate to relatively minor innovations hinder rather than help industry. It has been asked whether such a complex and expensive procedure is really necessary and whether it could be replaced by something relatively simple, since the system might otherwise become unworkable and obsolete.

43 Our early conversations with those who gave evidence before us revealed that there was a general acceptance of the patent system as a fact of life, but there was little information on what must be the essential test of the value of patents, namely, whether they contribute anything, and if anything, how much, to the wellbeing of the country.

44 We have been unable to locate any relevant report or series of reports made in the United Kingdom or elsewhere which are generally accepted as based on an economic assessment made in depth and with academic objectivity. This is probably not surprising, as for such an assessment it would ideally be necessary to have factual information on the economic development of an industrialised country when operating a patent system and to set it against factual information on the economic development of the same or an equivalent industrialised country when not operating a patent system. As in practice patent systems in some form or another have always emerged and grown up simultaneously with industrial growth, such comparative information does not exist.

45 On this theme there is the example of the Netherlands which cancelled its patent system in 1869 and reintroduced the system in 1912. In 1908 a comparison was made of the export trades of the six countries, France, Germany, Switzerland, Italy, the United States of America and the Netherlands over the period 1884-1904. (*The Industrial and Commercial Influence of the English Patent System*, A. F. Ravenshear, 1908). The author demonstrated that the Netherlands was the only country whose exports showed a diminishing proportion of manufacture and concluded "that the change which has been taking place over a long period in Holland was due to the absence of a patent system".

46 We are aware that the Department of Applied Economics in the University of Cambridge is conducting a detailed economic investigation, but its report is not yet available. Accordingly, we have based our assessment on a study of the history of the development of the patent system in this country and elsewhere and on the representations based on a wide range of experience which were made to us both in writing and orally.

47 In assessing the lessons to be drawn from these representations, we found it imperative to keep well in mind that the existence or otherwise of patent protection is only one factor amongst many which influences the decisions leading to the initial adoption and subsequent industrial development of an invention.

48 As indicated in the Preface, the conception of granting limited monopolies for new inventions to encourage the growth of industry in this country emerged and grew up over a long period and developed into an organised system which was examined, re-examined and modified over the years in keeping with the growth of industry. The general form of the system which developed in this country was followed in principle by other countries as their industries grew and they moulded it to meet their particular requirements.

49 It is significant that Russia had an industrial patent law as early as 1812 and, although under the Czarist regime they had a controlled economy which is still more closely controlled under the Soviet regime, the basic thinking in respect of patents was clearly much along the lines of the United Kingdom and other industrialised countries, so that the patent law of Lenin of 1919, the 50th Anniversary of which was celebrated at an international symposium in Moscow in June 1969, follows the same general theme.

50 Although there is general acceptance of the conception that a man producing a creative work such as a book, picture, sculpture or music should have a personal monopoly, at least for his life, for the reproduction of his own work, it is significant that patent monopolies for inventions have, from earliest times, been much shorter in time and have been concerned much more with encouraging manufacture within the country than with encouraging the creation of the invention itself.

51 In early days the objectives were clearly stated by Henry VII's Chancellor, Cardinal Morton, "that our people be set on works of art and handicraft; that our Realm may subsist more of itself; that idleness be avoided, and the drawing out of our treasures for foreign manufacture stopped". In the celebrated "*Case of Monopolies*" *Darcy v. Allein* before the Queen's Bench in 1602 one of *Allein's*

Counsel, Fuller, included in his speech on behalf of the defendant one statement which has achieved lasting fame:

Now therefore I will shew you how the Judges have heretofore allowed of monopoly patents which is that where any man by his own charge and industry or by his own wit or invention doth bring any new trade into the Realm or any Engine tending to the furtherance of a trade that never was used before and that for the good of the Realm; that in such cases the King may grant to him a monopoly patent for some reasonable time, until the subjects may learn the same, in consideration of the good that he doth bring by his invention to the Commonwealth; otherwise not.

52 Throughout one finds the controversy whether the granting of manufacturing monopolies is beneficial to the national economy or otherwise. Successive Patents Acts have referred to Section 6 of the Statute of Monopolies passed in 1623 in the reign of James I. This Act confirmed a general ban on manufacturing monopolies, but by Section 6 specifically excluded from the ban patents for invention.

53 The close connection of patents for invention with the encouragement of manufacture within the country, that is, the industrial aspect, has persisted throughout, and no alternative system with the same general aim has gained wide support, much less been accepted. We ourselves have not received any proposals for an alternative system.

54 Generally speaking, societies tend to resist the creation of monopolies whether held by the State, by individuals or by organisations. This inherent resistance to monopolies is to be found in the industrial field, and indeed the early court actions and the Statute of Monopolies of 1623, *were all directed against monopolies in the industrial field*, but recognised and accepted the advantage of leaving scope for a monopoly, limited in time, to encourage the man with the resources to build up an industry not previously known in this country.

55 The debate on the desirability or otherwise of industrial monopolies of any kind has continued and we have every reason to believe will continue. The United Kingdom patent law includes provisions to deal with "abuses of monopolies"; those persons concerned with the laws limiting restrictive practices and with anti-monopoly legislation in this country have made appropriate representations to us; it has also been made clear to us that in the United States, with its strong Anti-Trust laws and procedure, much care has to be taken by patentees as to the form in which licensing and other arrangements are made under United States patents. These are otherwise granted without even those limitations in respect of abuse which are written into the United Kingdom patent law.

56 We have found a general acceptance that the act of invention and the development of new ideas is inherent in the human mind and would continue without any legal protection for the results. As, however, a patent system increases the possibility of reward for the successful exploitation of invention, there can be little doubt that it does play a part in encouraging individuals to invent and organisations to create conditions in which inventions can be made. But the basic aim of a patent system, and indeed its effect, is to encourage the successful industrial application of inventions. The man with the resources can normally be expected to put those resources to industrial use without special assistance in established fields, where he can be reasonably assured that his factory will work technically and where the demand for his product is already known to exist. If,

however, resources are to be put at risk to develop a new process or product, which has yet to be tested, then he will hesitate lest the expense of the development may prove to be irrecoverable while his competitors can wait and, without equivalent expense, pick up and use the successful results. It is the knowledge that a patent monopoly will enable him to hold off competition for a period which encourages him to take the risk and use those resources to develop new industrial inventions.

57 We also found general acceptance that a patent is of help to the man who holds the patent but does not have the resources. He is able to discuss his invention freely with others in the knowledge that they can only make use of his invention by co-operation with himself, by licence or joint venture or some other means.

58 As indicated in Appendix A we received evidence from a wide range of individuals and organisations, including the Ministry of Technology, the Confederation of British Industry, the Trades Union Congress, industrial and professional associations and individual industrial firms, and an analysis of all the evidence shows it to be positively and overwhelmingly in favour of the maintenance of the patent system. As has been said, no alternative scheme was put to us. The adverse criticisms turned essentially on the implementation of the system in certain respects, and in general the proposals made were for strengthening the system, particularly to meet current developments in national and international industry and technology.

59 In pursuing an answer to the fundamental question of the value of patents, we sought information on the extent to which United Kingdom industry avails itself of the patent system, and how useful it finds the patents granted. The evidence we received showed that throughout United Kingdom industry there is a general interest in and use made of the patent system. It also showed that the degree of interest and use made varied across a whole spectrum from industries built up on patented inventions to industries with little interest in patents, these being mainly industries of long standing where a large number of effective technical alternatives has been developed over the years so that astute buying, good marketing and commercial expertise generally are held to be of more value in keeping ahead of competitors than new technical developments.

60 A good example of an industry relying heavily on patents is the man-made fibre industry where a series of patented inventions has encouraged industrialists to invest hundreds of millions of pounds in developing the original viscose rayon and at intervals thereafter nylon, acrylics and the whole range of other fibres. Some of the latest developments are the special forms of carbon fibres for which important patents are held by the National Research Development Corporation on behalf of Government establishments where some of the original work was done.

61 In order to supplement the information available on the use of patents by different sections of industry we put an informal questionnaire to 58 firms (see Appendix G(a)). 39 firms replied to the questions on patent statistics; 26 replied to the questions on licensing. Some international companies hesitated to answer any of the questions because of the difficulty they found in separating out in any useful manner the information on patents and research relevant only to the

United Kingdom. Reservations were expressed on the exact interpretation to be placed on the number of patents in "commercial production".

62 The questionnaire was not intended to produce precise statistical results but an analysis made of the replies is shown in Appendix G(b). The replies were grouped under five industrial categories on the basis of the principal activity of the firm. The Table shows most patenting activity in the chemical industry, and a notable increase of about 8 per cent in domestic patenting in all industries, over the period 1961-67 inclusive, and indicates that some 30 per cent of patented inventions are in commercial use—more than generally thought. It also emerged from the replies to the questionnaire that, as a rough average, firms seem to spend about 2 per cent of their research and development expenditure on patenting. Expenditure on research and development per complete specification filed seems to be much the same for all groups with the exception of the mechanical group where the expenditure is much less. On licensing, those firms which gave information tend on average to grant about the same number of licences as the number they take. This information, together with the other information we received on the general use United Kingdom industry made of patents, was necessarily limited, but nevertheless we found it useful in our discussions on the evidence in respect of the use made of the patent system by firms large and small.

63 The Report* dated July 1968 of the Central Advisory Council for Science and Technology pointed out that "most inventions particularly in industries based on advanced technology are now sought systematically" as part of planned programmes of innovation and marketing. But this does not mean that all inventions today are necessarily "team" inventions. We have considered therefore the problem of the free-lance inventor of whom there have, in recent years, been some notable examples.

64 The individual inventor, unless he commands adequate resources, cannot derive benefit from his invention without obtaining financial backing or without having his invention taken up by some industrial firm. It is the patenting of his invention which puts the inventor in a position to negotiate and obtain value from his invention. It was partly in recognition of the difficulties of the free-lance inventor in obtaining finance that the National Research Development Corporation was established. The Corporation has over the years sponsored a number of significant inventions made by free-lance inventors.

65 It is significant to note that the present general form of the system as developed in this country has been followed by other countries. Differences in philosophies have affected the details of each system which has been moulded to meet particular national requirements, but the general form is the same throughout the world, including the Soviet Union, despite its fully state-controlled economy.

66 Patents are recognised in all industrial countries as a useful basis for negotiations between companies who are concerned to innovate. It is indeed from the implications for international trade that much of the pressure comes for co-operation in, and harmonisation of, national patent systems. If patents were solely a national affair it might be that some other system might emerge. But for countries which must rely for their standard of living on keeping industrial practice up-to-date the international aspect of patenting is an important factor.

* *Technological innovation in Britain*, HMSO.

Aspects of international activity are:

the licensing of patent rights with the advantage of feed-back to the licensor of know-how from the licensee;
the encouragement given to foreign firms to set up manufacturing enterprises in this country;
the world-wide exchange of technical information which springs from the publication of patent specifications. Such publication is a direct result of the patent system, without which there would undoubtedly be much more secrecy than at present.

67 Our deliberations lead us to subscribe to the Swan Committee's conclusion that industrial development over the years justifies the patent system. We would sum up as follows:

- (i) Wherever industry has developed, patent systems have emerged and been adopted and have played an important role in encouraging innovation.
- (ii) No alternative system for the encouragement and growth of new industry by private enterprise has been established.
- (iii) National patent systems have been of increasing importance in the world-wide development of technology, with resulting benefit to the expansion of international trade.

We concluded that the value of the patent system is established in the terms expressed above.

68 There remains the qualification that the complexity of the administration of the system, which arises partly from the surge of technological discovery and partly from the concept that a patent is a piece of property, with its legal connotations, ought not to be allowed to detract materially from the value of patents to the national interest.

Specific Criteria for the Canadian Patent System as proposed by the Economic Council of Canada - Report on Intellectual and Industrial Property.

- (1) The Canadian patent system should encourage invention and other steps in the total innovative process within Canada.
- (2) It should encourage rapid and effective dissemination of technical information and other "technological transfer", both within Canada and between the rest of the world and Canada.
- (3) It should facilitate the making of a fair Canadian contribution, but no more than that, to the economic costs of providing appropriate special incentives to research and innovation the world over.
- (4) It should be compatible with Canada's broader strategy of economic development and science policy. For example, it should not encourage, as it might if the working-in-Canada provisions of the existing Patent Act were vigorously enforced, a new proliferation of small-scale, high-cost manufacturing in Canada. Rather, it should help to promote the kind of internationally competitive pattern of secondary manufacturing that was envisaged in the "Scale and Specialization" chapter of the Economic Council's Fourth Annual Review. While working of foreign inventions in Canada is normally the most complete and effective means of technological transfer into Canada, it is achieved at too high a cost if it results in Canadian resources being used in productive ventures that can never aspire to exports and can only go on existing domestically behind an absolute patent barrier to imports. In such cases efforts should be concentrated on conveying knowledge of the relevant technology into Canada by other means, on a purely informational basis for the time being.
- (5) The reformed Canadian patent system should be administratively workable, without any major net addition to existing overheads, but with provision for a more effective performance review than has been possible in the past. There should also be more effective interrelation with other government policies bearing on industrial innovation. A more thorough-going preparation for Canadian participation in international patent conferences is also appropriate since these constitute an activity related to a vital national economic interest.

EXCERPTS FROM TREATIES RELATING TO SECTION
24 OF THE PROPOSED PATENT LAW

PARIS CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY
as revised at London on June 2, 1934.

Art 5ter

In any country of the Union the following shall not be
considered as infringement of the rights of a patentee:

1. the use on board vessels of other countries of the Union of devices forming the subject of his patent in the body of the vessel, in the machinery, tackle, gear and other accessories, when such vessels temporarily or accidentally enter the waters of the said country, provided that such devices are used there exclusively for the needs of the vessel;
2. the use of devices forming the subject of the patent in the construction or operation of aircraft or land vehicles of other countries of the Union, or of accessories of such aircraft or land vehicles, when those aircraft or land vehicles temporarily or accidentally enter the said country.

(Ratified by Canada, July 30, 1951)

CONVENTION ON INTERNATIONAL CIVIL AVIATION SIGNED IN CHICAGO
DECEMBER 7, 1944.

Art 27

Exemption from seizure on patent claims

- (a) While engaged in international air navigation, any authorized entry of aircraft of a contracting State into the territory of another contracting State or authorized transit across the territory of such State with or without landings shall not entail any seizure or detention of the aircraft or any claim against the owner or operator thereof or any other interference therewith by or on behalf of such State or any person therein, on the ground that the construction, mechanism, parts, accessories or operation of the aircraft is an infringement of any patent, design, or model duly granted or registered in the State whose territory is entered by the aircraft, it being agreed that no deposit of security in connection with the foregoing exemption from seizure or detention of the aircraft shall in any case be required in the State entered by such aircraft.

- (b) The provisions of paragraph (a) of this Article shall also be applicable to the storage of spare parts and spare equipment for the aircraft and the right to use and install the same in the repair of an aircraft of a contracting State in the territory of any other contracting State, provided that any patented part or equipment so stored shall not be sold or distributed internally in or exported commercially from the contracting State entered by the aircraft.
- (c) The benefits of this Article shall apply only to such States, parties to this Convention, as either (1) are parties to the International Convention for the Protection of Industrial Property and to any amendments thereof; or (2) have enacted patent laws which recognize and give adequate protection to inventions made by the nationals of the other States parties to this Convention.

(Ratified by Canada on February 13, 1946)

Report On An Inquiry Into The Patent Cooperation Treaty As Related To The Canadian Patent Office, And Searching And Examining Procedures Of The Patent Office

Pursuant to directives received from the Minister of Consumer and Corporate Affairs, the Commissioner of Patents appointed a Board of Inquiry to consider submissions respecting ratification of the Patent Cooperation Treaty by Canada, and other important proposals for modification of searching and examining procedures within the Canadian Patent Office. The appointment of the Board was announced in a memorandum forwarded to interested parties within Canada on May 29, 1974, and subsequently published in the Patent Office Record of June 11, 1974. It was to consist of the Chairman of the Patent Appeal Board, Gordon A. Asher, and Mr. R.O. McGee, a consultant to the Commissioner of Patents, and was charged with considering any briefs received, to hold hearings if desirable, and to report on its findings.

Interested persons were asked to submit briefs by July 31, 1974, discussing the following questions raised in the memorandum.

- (a) In your view, should Canada ratify the Patent Cooperation Treaty and adopt a policy of accepting search reports of an accredited international searching authority for international patent applications filed in either the English or French language?
- (b) In your view, should Canada in the public interest go further and permit the Commissioner to accept search reports carried out in any foreign country (as may be designated by regulation) of patent applications pertaining to the identical or substantially the same inventions as covered in the Canadian applications?
- (c) In your view, should Canada in the public interest go further and amend the patent legislation to permit the Commissioner to accept for purposes of the Canadian examination of patent applications, the results, either in whole or in part, of the examination in foreign countries (as may be designated by regulation) of patent applications pertaining to the identical or substantially the same inventions as covered in the Canadian applications?
- (d) In elaboration of answers to queries (a), (b) and (c) regard should be had to the following points:
 - i) the difficulty, if any, of determining the meaning and applicability of "substantially the same" inventions;

- ii) differences in the Canadian substantive patent law and procedures from the laws of the United States, the United Kingdom, France, and the proposals of the European Patent Convention, which might prevent an affirmative response to queries (a), (b) and (c);
- iii) difficulties that could be encountered in revising the Canadian Patent Act and Rules to conform to the requirement of PCT which might prevent an affirmative to queries (a), (b) and (c);
- iv) the use or misuse of present Rule 39;
- v) any other relevant matters.

Four organizations and 26 individuals replied, and twenty-eight briefs were received. The Patent and Trade Mark Institute of Canada stated it would not submit a brief because it considered it had insufficient time to canvas all its members properly, particularly during the summer months. It noted, however, that many of its members would reply individually and a representative cross section of Institute views would consequently be available. The International Association for the Protection of Intellectual Property felt the matters raised were outside its organizational terms of reference. Two organizations, The Canadian Manufacturers' Association (CMA), and The Copyrights, Inventions and Patents Association of Canada (C.I.P.A.C.) did provide comments.

Those who submitted briefs may be categorized as follows:

Patent agents in corporate practise	7
Patent agents in private practise	9
Nonresident agent	1
Associations (C.M.A. & CIPAC)	2
Members of the Patent Office	
examining staff	9
	<u>28</u>

One American associate of PTIC forwarded a letter to that organization describing some procedural problems in the Patent Cooperation Treaty, which letter was transmitted to us. It did not, however, express any views as to whether Canada should ratify the treaty.

In addition we had before us a report of a special committee of patent examiners who studied PCT for the Commissioner in 1970.

No formal hearings were requested, though the Board did meet with one patent agent who came to Ottawa for an informal discussion, and with two patent examiners. In addition CIPAC indicated a desire to see the Board, but since most of the items of concern to it fell outside the terms of reference of the inquiry, it was decided such points would be handled through other channels.

Several respondents expressed concern about the shortness of the time within which they were asked to supply comments and about certain ambiguities they perceived in the text of the memorandum. For example, some were uncertain whether the PCT (or other) search report was to be the only search made relative to Canadian applications, or whether they would be used as adjuncts to a separate Canadian Patent Office search. It was, for example, on the assumption that the Canadian Office would conduct a search in addition to the PCT search that some favoured ratification of PCT. Our own interpretation is that in questions (a), (b), and (c) the searches (or examinations) referred to would be the sole search (or examination) undertaken, and there would be no supplementary Canadian search (or examination).

Speaking generally, the submissions presented very little hard information upon which firm recommendations could be formulated. However, they did reveal the reasoning and logic upon which individual conclusions were developed, and this was helpful to the inquiry. Furthermore they reflect the cumulative experience, knowledge and intuition of experts in intellectual property law. As such they are useful indicators on what course should eventually be adopted.

We have also had before us a recent paper, "P.C.T.", by Mr. Peter Kirby, which was presented at the October 1974 annual meeting of the Patent and Trademark Institute of Canada. In the additional time which was available to him between July and October, Mr. Kirby has developed an extensive commentary on the points we are considering. We understand it will be published shortly in the bulletin of the Institute.

We have related our analysis of the responses to the specific questions posed by the Commissioner.

Question (a) (Re PCT)

"In your view, should Canada ratify the Patent Cooperation Treaty and adopt a policy of accepting search reports of an accredited international searching authority for international patent applications filed in either the English or French language?

The subject generating the most interest and evoking the largest response was the Patent Cooperation Treaty. To understand more readily the discussion of it which follows, a short and necessarily incomplete description of it is indispensable.

The treaty is an international agreement reached by many countries in 1970 with the object of facilitating the filing of applications for patents in a plurality of countries. It attempts to do this by easing and reducing the procedural details involved in such filings. It provides for a high quality international search to replace in whole or in part the separate searches now conducted by each patent office independently of what is occurring elsewhere. In chapter II the treaty also proposes an international examination to determine whether the invention is more than an obvious improvement to what has been shown in the related prior art turned up by the international search.

PCT would provide an alternate filing route to the present system in which an applicant files separately in each country in which he desires protection, and in the official language of each country. Under the treaty the applicant would not need to file in the individual countries until he knows what the international search has turned up, and whether it appears that his invention is new. He also is given additional time in which to make his decision to complete the individual filings. Under PCT the filing requirements of all participating countries would be unified.

The treaty will not come into effect until a specified number and categories of countries have ratified its provisions. To date only a few states have done so. Whether the treaty will be of any value to Canadians will depend, of course, upon which countries do finally commit themselves to it. It must also be borne in mind that fees associated with a PCT filing are anticipated to be fairly high. The PCT route is expected to be more expensive for an applicant than separate national filing unless he wishes to obtain patents in several countries - five has been suggested as a necessary minimum before there are any savings.

This may be a particular weakness from the Canadian viewpoint, since independent studies show that 83% of Canadian inventions are filed in fewer than three countries, and only 14% in more than five. But for applicants who do intend to file extensively the savings may be important. They certainly would be if the international search showed an invention to be old, since in that event they might (but would not be required to) discontinue their application and avoid expensive translation charges. They would benefit from the additional time afforded them to decide whether to proceed with their invention. And they would benefit from such improvements in searching quality as the treaty may bring about.

Individual patent offices will still need to maintain their searching and examining facilities, since the treaty does not preclude separate national filings, though any country could subsequently abolish them if it so wished. These facilities could be reduced, however, to the extent that international searches reduced their own searching requirements or led to the

abandonment of an application they would otherwise be required to process. No country, however, would be bound to accept the international search as conclusive, and might make such additional searches as it deemed desirable.

Chapter II envisages the establishment of international examining authorities, which would assess applications and report whether they consider the invention claimed to be novel, unobvious, and industrially useful -- that is, whether the invention is patentable. This might be particularly helpful to developing countries whose patent offices are not sufficiently established to make this determination, and who could consequently rely on the searching and examining procedures of the central authorities in deciding whether to permit an application to proceed to grant. Other countries could also utilize the centralized examination results if they wished, either as the sole examination, or as an adjunct to their own examination. It is anticipated that the more developed countries may wish to examine applications themselves to ensure that patents they issue conform to their national laws. During the Washington Conference Canada put on record its own position with respect to chapter II, and indicated it would not be a party to its provisions. This, indeed, was the position of most national representations at the conference.

With that background explanation we turn now to the received comments about the treaty. Many individuals expressed support for Canadian ratification provided the international search is treated only as something additional to our own search. The following table summarizes in a generalized fashion the attitudes expressed.

	<u>Favour Ratification</u>	<u>Favoured if Canadian search con- tinued</u>	<u>Opposed to Ratification</u>
Patent agents - private	1	3	3
Patent agents - corpor- ations	3	3	1
Associations	1	-	-
Patent examiners	1	3	4
	<u>6</u>	<u>9</u>	<u>8</u>
<u>Total: 23</u>			

Those opposed to ratification felt that Canada would have little to gain in participating. They pointed out that most Canadians are unlikely to file in more than a few countries, and outside of Canada probably only in the United States and Great Britain. Under such circumstances it is unlikely that many Canadians would choose the more expensive PCT route to obtain patents.

Another view was that the greatest benefits under the treaty are likely to flow to large international firms, mainly American, German or British-owned, who file in many countries. In that context it may be noted that most of the agents favouring ratification are associated with larger multinational corporations.

A fear was voiced that ratification might lead to greater domination of Canadian industry through patents controlled from abroad. (The delays in implementing the Nordic patent union have been ascribed in part to such a concern). PCT would, presumably, make it simpler for nonresidents to patent in Canada and by so doing reduce still further the fractional proportion of Canadian patents now granted to Canadians.

It was pointed out that the Canadian Patent Office can already (and does) obtain the results of searches made by foreign patent offices on applications filed elsewhere which correspond to a Canadian application. This is possible through the provisions of rule 39 of our patent regulations, which has been in effect since 1935. The results of PCT searches would also be available to the Canadian Office by way of rule 39. For that reason the supposed advantages accruing to ratification are lessened considerably for this country.

Some remarked that since Canada already possesses a trained corps of patent examiners, it does not have the same need as a less industrialized country for assistance in searching and examination. It is more capable of determining whether an invention is patentable, and more likely to grant valid patents. If PCT were adopted, particularly in all its aspects, there would, it was said, be a gradual weakening in the patent profession within this country, with the result that we would become more dependent upon foreign countries for such expertise.

There was a general feeling that while it would be useful to the Canadian examiner to have PCT search results available to him, the additional costs involved in participation might well exceed such benefits. Several persons, under the impression that the international searching authorities might not search prior Canadian patents, felt that the validity of our patents would

deteriorate unless independent searches were made by the Canadian Office. However, there are provisions in the treaty (PCT, Rule 34.1(c) (vi)) by which Canada could supply Canadian art to the searching authorities. Doubtless this would be done should Canada ratify. However, the treaty itself does not require international searching authorities to search patents predating 1920, and there may be problems in providing them patents in a form which they will accept. For example, Canadian patents issued before 1948 were not printed. Consequently, there could be limitations to the scope of Canadian art searched under PCT.

Others felt that if Canada becomes locked into PCT, this will hinder subsequent modification of our patents laws whenever that proves desirable. In some respects this concern is valid. For example, under article 27 requirements concerning form and content of international applications could not be altered unilaterally. Similarly there could be indirect influences and pressures to prevent amendment. However, in substantive matters there remains considerable latitude in what modification Canada might make in its own legislation.

There were also a number of other suggestions and comments. Some felt, for example, that Canada might better devote its efforts to assisting inventors within Canada, in lieu of allocating its resources and efforts to the treaty. It was proposed that if PCT were adopted, the Canadian Office should participate on a shared basis in the work of one of the international search offices, and in particular with the United States Patent Office if it, as anticipated, becomes a searching authority. Some felt that there has been insufficient time for collection, assimilation and consideration of all the necessary facts about the implications of PCT, and that there should be more serious and exhaustive debate within the patent profession and elsewhere before firm recommendations are made. Considering that it is now eight years since PCT was proposed, this comment reflects earlier apathy to the treaty in this country.

Some opposition to ratification revolves about section 58 of the present Canadian act. It provides that anyone who uses an invention before a patent is granted may continue to do so afterwards. Under PCT applications will be published 18 months after filing, and before they are granted. Competitors would thus come into possession of the invention before it is patented, and by practicing it before grant, obtain a right to continued use after grant. As attention will doubtless be given to section 58 in any legislative revision to the Patent Act resulting from the recommendations of the Economic Council of Canada, it is not unlikely that the interplay between PCT and section 58 will be resolved before difficulties of this nature develop.

Others remarked that a great deal of clarification is required on the international scene before it becomes apparent whether PCT is a workable arrangement or not and which countries will adhere to it. If PCT does not include a large block of major industrialized countries, including France, Germany the United States, the United Kingdom, Holland, Sweden and Japan, PCT will not become a major force and ratification would be undesirable. It would be particularly undesirable if Canada ratified the treaty together with a sufficient number of smaller countries to bring it into force, with the larger states remaining aloof. Canadians would not then have the benefit of PCT filings in the main countries of interest to them, and it would be extremely difficult for the treaty organization to provide an adequate search facility. At the same time its value to the Canadian Office would be similarly diminished.

Another objection was aimed at the type of search which would be made by the international searching authorities. For example, it was stated that a search made by a country having a German-type patent system is likely to be disclosure oriented (rather than claim oriented), and focus upon the specific industrial art in which the invention is used. It would ignore questions of obviousness which would arise if the search were more oriented to the structure of the invention. This could create problems for countries such as Canada where the patent law is claim oriented, and where obviousness is an important criterion in assessing patentability. The provisions of article 15 in the PCT do, of course, go some way to obviate this kind of difficulty.

Cost was another concern. To quote from one submission: "...the proponents of the treaty lost sight of the original concept of reduced costs and simplified procedure and ended up with a complex procedure which may create more problems than it solves...". Others felt that the PCT route would in some instances delay the granting of a patent, since it does not permit such flexibilities as advanced prosecution to speed up prosecution whenever it is apparent normal prosecution might prejudice the rights of applicants. The Canadian regulations permit advanced prosecution under these conditions. Some felt that the only countries which would benefit from PCT are those whose search systems are not well developed, and those whose search system are so well developed that they will become international searching authorities. Canada does not fit into either category.

Those who favoured ratification of PCT did so on the basis of anticipated advantages to applicants who wish world-wide protection for their inventions, and because of the improvements it might bring to the standard of Canadian examination and patents. There was also some sentiment for Canada doing its part internationally in a spirit of "sharing" and international cooperation. It was also felt that without the type of intercountry cooperation envisaged by the treaty it will soon be impossible for individual offices to search the ever multiplying bulk of technical and

patent literature. By ratifying PCT Canada would "do its bit" to bring about an effective international searching organization and perhaps, eventually, a world patent valid internationally. By participation now it would have a greater influence in shaping such a development to meet Canadian needs.

No support was expressed for ratification of chapter II of the treaty and all parties who discussed the chapter urged that Canada exercise its reserve options under article 64 of the treaty, even if other parts of the treaty are adopted. It was felt that the differences between the procedural and substantive provisions of our patent law and that of other countries are sufficiently great that it would be inappropriate for this country to rely upon, or even to utilize for informational purposes an examination carried out in another country. Mental, cultural and legal differences were pointed to as part of this problem. It was also felt that the current uncertainties about who these searching authorities might be and the quality of examination which would be provided are such that it would be undesirable to subscribe to chapter II.

Question (b) (Foreign Search Reports)

In your view, should Canada in the public interest go further and permit the Commissioner to accept search reports carried out in any foreign country (as may be designated by regulation) of patent applications pertaining to the identical or substantially the same inventions as covered in the Canadian applications?

The second question put by the Commissioner in his memorandum was whether apart from PCT the Canadian Office should accept searches made in foreign countries on related applications as adequate for purposes of its own examination. If so, such countries would be designated by regulation. They would be selected both by virtue of the quality of searches they make and the compatibility of such searches with the needs of the Canadian examination system.

The results of the inquiry on this point may be summarized as follows:

	<u>In Favour</u>	<u>Opposed</u>
Patent agents - private	1	6
Patent agents - corporations	2	4
Associations	1	-
Patent examiners	1	6
	-	-
	5	16

Total: 21

Those in favour of the proposal felt there would be no difficulty in relying upon foreign searches provided they were restricted to those made by countries known to have adequate search resources and capabilities. Others felt that the foreign search should merely be an addendum to a search made by the Canadian Office. This in effect would be the same as our present rule 39 practice. Most voiced opposition to the proposal on the basis of incompatibility between classification systems, the patent laws, and national patent philosophies. They believed these would result in an inadequate search upon which to base a Canadian examination. They cited different approaches to "mosaicing" of art, obviousness, omnibus claims and contributory infringement as exemplifying such differences. Also mentioned were differences in interpreting terms and difficulties which might arise where the foreign office uses a first-to-invent or a deferred-examination system. They voiced concern that it would not be in the public interest to increase the incidence of invalid patents for purposes of economy in the operations of the Patent Office. In the long run, according to this view, both the inventor and the public would pay more.

Question (c) (Foreign Examination)

In your view, should Canada in the public interest go further and amend the patent legislation to permit the Commissioner to accept for purposes of the Canadian examination of patent applications, the results, either in whole or in part, of the examination in foreign countries (as may be designated by regulation) of patent applications pertaining to the identical or substantially the same inventions as covered in the Canadian applications?

There was nearly unanimous opposition to acceptance of a foreign examination of an application corresponding to a Canadian application in lieu of an examination by the Canadian Patent Office. The returns are tabulated below.

	<u>In favor</u>	<u>Opposed</u>
Patent agents - private	1	6
Patent agents - corporation	0	7
Associations	1	1
Patent examiners	0	7
	<hr/>	<hr/>
	2	22

Total: 24

Those who expressed approval gave no explanation or reasons for their position. The reasons advanced against this proposal were essentially those detailed above against the other proposals, and there is little value in repeating them here. The greater effect that differences in law (and other incompatibilities) would have upon examination than upon searching explains why there is more opposition to using a foreign examination than a foreign search.

Alleged weaknesses showing up in a similar scheme adopted in Australia were also cited. Under a "modified examination" system permitted in that country, inventors who have been granted patents in the United Kingdom or the United States may have their applications in Australia issue to patents without further examination. The specification must be identical (or made identical) to the US or UK patent, otherwise it would be necessary to consider and examine the differences and any advantage in the system would be lost. In Australia, oppositions to grant may be filed by interested parties, and this provides an added safeguard against the grant of invalid patents under the modified system. At present there is no opposition proceedings in Canada. Modified examination was adopted in Australia to speed up the work of the Office, on the basis that such streamlining justified the possibility of some invalid patents slipping through.

Some distinctions should be noted. Under the Australian modification it is the applicant who elects whether the modified examination is to be followed or normal examination is to occur. Because Australia has deferred examination this election could be made up to five years after the application was filed. Under the Commissioner's proposal for Canada, by contrast, it would be the Commissioner who would determine whether the modified system is to be used.

Initially many applicants in Australia requested modified examination (25.9% in 1970), but this has since decreased, and for the first six months of 1974 was about 14%. It was suggested that the probable reason for this decline is twofold; applicants have become more aware of the shortcomings in the system and a substantial decrease in backlog of unexamined applications has resulted in less opportunity for modified examination, since it can be requested only with respect to applications for which the corresponding British or American patent has already been granted.

From the applicant's viewpoint the shortcomings stem from the necessity for the Australian patent to conform to the foreign patent. Because of differences in patent law this sometimes means

that the patent resulting from modified examination would not offer suitable protection in Australia. Amendments cannot be made to avoid art subsequently discovered, or to put the claims and disclosure in a form better suited to the exigencies of Australian judicial precedents. In some cases there is no savings in cost for the applicant. Though the fee for modified prosecution is \$20 lower than the normal fee, this saving can be eaten up in the cost of providing a certified copy of the US or UK patent and the cost of amending the application to make it conform to the patent.

Special problems arise when the Australian application is equivalent to two or more UK or US patents, since in that case the Australian application must be divided and the divided matter subjected to normal examination. Several instances were mentioned to illustrate why US or UK patents may be unsuited to Australia. One was that the foreign claims may be unnecessarily limited because of prior art pertinent in the United States but not available in Australia, and consequently not applicable in Australia. Another related to the differing effects of abstracts upon the interpretation of patents. Still others involved more remote and less obvious results which such differing refinements in patent law as contributory infringement might have upon the protection afforded patentees.

Question (d) (Other Relevant Matters)

In elaboration of answers to queries (a), (b) and (c) regard should be had to the following points:

- i) the difficulty, if any, of determining the meaning and applicability of "substantially the same" inventions;
- ii) differences in the Canadian substantive patent law and procedures from the laws of the United States, the United Kingdom, France, and the proposals of the European Patent Convention, which might prevent an affirmative response to queries (a), (b) and (c);
- iii) difficulties that could be encountered in revising the the Canadian Patent Act and Rules to conform to the requirements of PCT which might prevent an affirmative to queries (a), (b) and (c);
- iv) the use or misuse of present Rule 39;
- v) any other relevant matters.

The response to the other points raised in the Commissioner's memorandum was limited. Only one person was concerned about difficulties in assessing whether a foreign patent is directed to the same invention as a corresponding Canadian application. Eight specifically stated that they foresaw no difficulty or serious difficulty.

Differences between our patent law and foreign laws were not thought to pose any difficulties in using foreign searches as an adjunct to a Canadian search. Two persons felt that if we accept foreign patents for registration without examination many patents would be invalid because of disconformity with our law. Another was concerned about this possibility.

Five responses referred to problems in revising the Canadian Act to conform to PCT, but foresaw no serious difficulties in doing so.

Comments made about the use of rule 39 were interesting. For many years it was looked on with derision by the patent profession, which referred to the practice as "shocking", "humiliating", "shameful", "evidence of second-class nationhood", "shabby", "dishonest", and "poaching on the fruits of our neighbour's labour". Obviously time mellows many things, and what was once opposed so vigourously is now embraced as desirable and worthwhile. The practice is seen today as an important tool for reducing the number of invalid patents and as giving applicants better protection. The growing acceptance and utilization of similar provisions elsewhere, in Denmark, Sweden, Germany, in an indirect form in the United States (full disclosure requirements) and elsewhere, has doubtless contributed to this change in attitude. Of the eight who discussed rule 39, all favoured its continued use, felt it has not been abused, and said it did not create difficulties. Several agents went so far as to suggest broadening its scope. For example, applicants might be required to explain why they consider their invention clears art cited abroad, to explain why any corresponding foreign application has been abandoned or to apply information about foreign citations automatically without a call for it by the examiner.

Some relatively brief comments were made about other matters relevant to examination, searching and other aspects of the patent system. Those included deferred examination; a two-level patent system involving short-term patents granted without examination for minor improvements, and long-term patents granted after extensive examination for major innovations; delegation of searching functions to technical assistants; a reduction in emphasis in the examination process on technical matters, such as division; greater coordination of technological information efforts both within and without government; the grant of patents for processes and products not otherwise patentable on the basis that they had not been used commercially in Canada; provisional applications; assistance for struggling inventors; and the like. None of these, however, was either sufficiently developed or germane to our inquiry to warrant detailed discussion in this report.

Summary of Comments

There is no general enthusiasm evident for any of the modifications to the searching and examining procedures suggested for consideration by this inquiry. Insofar as PCT is concerned, the value to Canadians as applicants was seen as marginal, its direct and indirect effects upon Canadian industry and consumers indeterminate, its savings improbable and the provisions of the treaty needlessly complex. The views favored keeping our options open, going slow and making no decision on ratification until we know more clearly what will happen outside Canada. The treaty was seen as something that is fine in principle and theory, but likely to prove unworkable and burdensome in practice.

Conclusions and Recommendations

Considering the significance of the changes to our patent system which would result if any of the revisions broached by the Commissioner were implemented, it is unfortunate that it did not provoke more comments. It is also unfortunate that those who did respond and we are grateful to them for presenting their views - are pretty well confined to practitioners in patent law, either as patent agents or as patent examiners. We would have hoped to see more expression of the interests of inventors, industrialists and the general public itself. To quote from the Report of the Economic Council on Intellectual Property (p 2):

"In the past, this area has been too much regarded as the specialized preserve of directly-interested groups such as inventors and their associates, authors, publishers, trademark owners and members of the specialized patent and copyrights branches of the legal profession."

We consequently felt forced to extrapolate beyond the submissions that came in to encompass what we have perceived to be a more general interest.

Taking that approach we have concluded that despite the flaws all too apparent in PCT, and the traumas that ratification might produce the potential in the treaty for reduction of needless duplication, and for easing the path to patenting for inventors is so great that Canada should not remain aloof and inactive. The burgeoning of technical literature is such that it will become more and more difficult and expensive for the Canadian Office to maintain an effective search system of its own. If the idea embodied in the treaty is not to wither, no state should hold back waiting for others to take the first step. Whether Canada adheres to the

treaty will not, of course, determine the PCT's ultimate destiny, but our failure to participate would, to some extent at least, reduce its effectiveness.

We have seen no persuasive reason to differ from the conclusions reached by the Economic Council, which as we have already indicated, was concerned about the widest possible public interest. We think it appropriate to include two quotations from pages 88-89 and 51 of their report.

"Canada should continue efforts at the international level to have the international search procedures of the Patent Cooperation Treaty instituted, the institution of the international search would economize somewhat on the use of resources in the Patent Office."

"One recent step towards greater international coordination of patenting is contained in the Patent Cooperation Treaty of 1970, where it is recognized that resources are wasted if every patent-granting country "searches for novelty" before issuing its patent on a particular invention, and where procedures are set up to work towards a group of common searching offices. But while this is generally viewed as a welcome development, it by no means necessarily foreshadows moves to inhibit each country's continuing right to grant, or not grant, a particular patent and to keep its own terms and procedural rules."

The special committee of patent examiners who studied PCT in 1970 also recommended that "Canada should join the International Patent Cooperation Union and ratify the treaty at least to the point of being bound by the provisions of chapter I". Their reasons were "that the better quality of the International search would result in fewer patents with invalid claims. The search time would be greatly reduced and this time could be spent on more thorough examination."

Canada, as one of the signatory powers, has already expressed its serious intent and interest in ratification of the treaty. While this is not an irrevocable commitment to ratification, we should have strong reasons to adopt a contrary course now.

We believe that some of the hesitation to support PCT within Canada relates to an aversion to change itself. In this respect we consider it appropriate to reflect upon the altered attitude to rule 39 within Canada, now that the rule has become an entrenched part of the established system.

For such reasons we believe the Canadian Patent Act should be amended to comply with the requirements of the treaty, and legislation enacted to enable ratification (quickly) at the appropriate time. However, without the larger countries such as the United States, the United Kingdom, France, Germany and possibly Japan and the Nordic countries as part of the treaty, it will be worthless to Canada, and there is no purpose in ratification itself prior to their adherence.

Another prerequisite for adherence must be the provision of suitable searching authorities to handle applications originating within Canada. The treaty itself imposes no obligation upon the searching authorities to accept applications from other nationals and this could be an important stumbling block to ratification. We will, of course, have a particular need for authorities which can process applications in our two official languages. Insofar as English language applications are concerned, there are many reasons why we deem it essential that the United States Office be the searching authority for Canada, and unless an agreement can be struck with it to do so, there should be no ratification by Canada. An extremely large proportion of our applications originate in the United States, and will be searched in Washington in any event. A predominant proportion of our applications are in the English language. Communication with Washington is expeditious relative to communication with other prospective searching authorities. The similarities between our countries and our legislation are such as to minimize the difficulties foreseen by respondents stemming from differences in legislation and outlook.

As for applications in the French language, the United States Office has already indicated it would process only English-language applications, and it will be necessary to turn elsewhere. At one time it was envisaged that the Institut International des Brevets (IIB) at the Hague would process applications in several languages, including French. That may still be the case, though it is also possible that recent commitments of the IIB to the proposed European Patent Convention may preclude such action on its part. In any event, it will be essential that the IIB or some other searching authority agree to process applications filed in French by Canadians or by non-Canadians designating Canada as a country where patent protection is sought.

Insofar as chapter II of the treaty is concerned, we think it would be prudent initially to exercise the reservation permitted under article 64 of the treaty. Until there is more definite information about the nature of the intended examination, the costs of international examination, and where the examining authorities will be established, it is impossible to gauge its value to Canada. Substantive differences in patent laws and procedures are likely to have a greater effect upon examination than upon searches. The Economic Council, as quoted above, foresaw a need for Canada

to "keep its own terms and procedural rules". The examiner's study group reserved its position on PCT. Our respondents felt it would be undesirable to subscribe to chapter II. Even so we see no reason to preclude enabling legislation now to permit its ultimate adoption by Canada should that prove desirable.

Participation by Canada will not initially, in our opinion, lead to any sudden or dramatic change for applicants, nor will it produce quick savings in the operations of the Office. Indeed it is not unlikely that some time Office expenses will increase. We see the benefits of the treaty as something that will only come with time, and gradually.

We think this caveat should be expressed both for those who might see the treaty as a panacea, and for those who might give up on it too quickly when difficulties arise.

The practice of accepting search results from designated foreign countries is more questionable. The searching authorities under PCT will be subject to certain international controls, and minimum standards respecting the nature and scope of the search would be specified. There is more uncertainty about the quality of search which may be performed by individual offices which do not become searching authorities. There may be diplomatic difficulties if some office is selected and not others. There is more likelihood that prior Canadian patents will not be searched. Art may be cited which is not readily available to the Canadian examiner, and his examination of the application may consequently be delayed while he obtains the reference. A more comprehensive search will of course throw a greater examination load upon the examiner, and would only be justified if it led to worthwhile improvements in quality. It should also be recognized that in his work the examiner normally combines the search with a consideration of the references found by that search. The actual effort expended upon the search itself is not so extensive as might otherwise be supposed. It is the assessment of the references rather than the location of them which preoccupies most of his time.

If, however, PCT does not come to fruition or Canada does not adhere to it, there may be some advantage in regulations authorizing the Commissioner to accept search reports emanating from a searching authority or from offices with high searching standards. Care must be exercised in determining what searches may be accepted, and the practice continued only so long as experience shows it does not seriously jeopardize validity, and that it results in useful economies. If PCT does come into being, however, we think it would be better to utilize the international search it provides.

The acceptance of a foreign examination of applications without re-examination in Canada presents some difficulties. Our earlier description of modified examination in Australia indicates a few of the snags that could result. Allowance under the patent laws of one country does not mean a similar patent would be valid in Canada, and it would be important that there be appreciable harmonization between our legislation and that of the foreign country under such a system. At present the United States act is the only legislation which we believe comes near meeting this requirements.

This issue involves two auxiliary questions related to examination - quality and the importance of patent validity. Some references were made to the high quality of Canadian examination. It was pointed out that many applications refused in Canada have been allowed in leading foreign jurisdictions. The most recent example of that is the decision of the Appeal Division of the Federal Court of Canada on October 2, 1974, in the matter of Nixon v. the Commissioner of Patents, which sustained a rejection on the grounds of obviousness of an invention patented elsewhere. Similar instances have come before the Patent Appeal Board in the last few years.

The counterevidence to that view, however, is that nine out of ten applications filed in Canada issue to patent, and that the Canadian rate of rejections is much lower than in many other patent offices. In this regard, reference might be made to the following data compiled from statistics published by the World Intellectual Property Organization in Geneva.

1965-1971 Inclusive

<u>Issuing Country</u>	<u>Applications Filed</u>		<u>Patents Issued</u>		<u>% of applicat Issued</u>	
	<u>Total</u>	<u>Foreign Origin</u>	<u>Total</u>	<u>Foreign</u>	<u>Total</u>	<u>Forei Origi</u>
Austria	71,867	57,300	51,704	44,298	71	77
Australia	98,748	72,747	41,931	36,651	42	50
Canada	180,098	169,491	163,475	155,284	90	91
Denmark	39,964	34,560	16,245	14,076	40	40
U.K.	355,157	110,891	240,648	90,813	67	79
U.S.	579,578	163,004	403,460	98,314	69	60

(Countries which have deferred examination, such as West Germany, Japan and the Netherlands have been excluded because of the distortions deferred examination would have upon the data)

It is, of course, important to treat this data with some caution. Marginal applications refused elsewhere seldom reach the Canadian Office or at least not to the same extent as they do elsewhere. Inventions patentable under one set of laws may not be patentable elsewhere. In Canada, prior art must be two years old before it may be applied. The data reflects abandonments as well as rejections and the reasons for abandonment may depend on factors quite unrelated to examination quality.

Those reservations aside, the data still leaves the impression that examination in Canada does not reach the levels attained elsewhere. Similar observations appear in the Economic Council Report (p 52):

"In addition, some Canadian companies have indicated that it is much more difficult to obtain patents in countries such as the United States, Germany and Japan than it is in Canada because of stricter procedures for granting patents":

in background study 26 of the Science Council of Canada (1973) (p 235):

"...the relatively lower quality which Canadian-issued patents are reported to have..."

and in Background Study No. 11 of the Science Council (1970) (p 26):

"The critics were concerned that the criteria of novelty, utility and unobviousness were not being applied sufficiently rigorously or sufficiently early in the examination of patent applications with the result that unsophisticated and technically trivial patents, or patents of obviously doubtful commercial potential, were being allowed to issue."

To what extent these criticisms are a heritage from the past when quality was undeniably low are valid today, is difficult to assess. The criticisms themselves betray a fundamental misunderstanding of the rôle of the Patent Office when they condemn the grant of patents of doubtful commercial potential. It is the function of the marketplace and not of the patent office to apply the test of commercial potential to new inventions.

To the extent the quality may be lower than elsewhere is a reflection upon the heavier work loads imposed on Canadian examiners and the inadequacies of tools provided to them. The Ilsley Report on Patents of Invention commented on both those points in 1960 (pp 140 & 141).

Quality standards impinge upon our inquiry from three directions: Are our existing quality standards already adequate for our actual needs? Would quality be impaired by accepting the results of foreign examinations? Would it be unduly impaired by doing so? We think the Royal Commission went a long way in answering at least part of that conundrum when it stated (p 19):

"We recognize the evil of the granting of invalid patents. But the two worthy objectives of (1) validity of all patents and (2) expeditious processing are, as we have said, to some extent in conflict with one another and we have in our recommendations tried to balance them in such a way as to provide a system with the maximum of advantage and the minimum of disadvantage. We entertain serious doubts as to the value of imposing on the Patent Office the responsibility for an exhaustive examination of patent applications. It is not, in our judgement, reasonable to expect examiners in the Patent Office to be able effectively to examine applications so as to ensure the validity of issued patents".

An argument might also be developed that the purpose of our patent system should be to attract technology to develop an indigenous technological capacity, and that for that purpose it is protection for innovation that should concern us, rather than protection for inventions. This is the thinking behind the proposals for petty patents, patents of importation and industrial development patents which were made to us, and which now are being debated within the World Intellectual Property Organization as a means to promote technology within developing countries.

This idea was also advanced by the Senate Committee on Social Policy (The Lamontagne committee) (Report, 1972, Vol. 2, p 558):

"The Committee believes that a substantial revision of the Canadian patent legislation and of its administration is long overdue. If the new system could be centered on the protection of an innovation rather than on invention that may never be exploited and if the granting process could be speeded up, it could greatly encourage the industrial innovation process and, by implication, the R & D effort of Canadian industry."

With such a purpose in mind, it might make some sense to accept for patent without further examination any invention which has the imprimatur of a foreign patent to attest to its probable patentability.

To our mind, however, this result may better be served by the institution of a petty patent system. To adulterate the existing patent system for that purpose would, we believe, unduly restrict the legitimate activity of industry in Canada, and overburden the courts with litigation of invalid patents.

We have felt that all of the proposals set out in the Commissioner's memorandum are desirable as goals, and represent objectives towards which we should be striving. Common searching and common examining functions make sense, but there are roadblocks to immediate acceptance of those ideals. Those roadblocks have been described earlier in this report. They include difficulties which would result from isolation of the searching function from the examining function, and the elimination of the direction the examiner now gives to the search. The comments we received from interested parties did not explore such matters as fully as we wished and do not permit us to reach firmer conclusions. We were left with the impression that the proposals were considered premature and would prove inefficient if implemented at the present time. It may be that a regional approach, which was one suggestion and a solution now in vogue elsewhere, offers a more efficient answer for the present, though that is fraught with special problems where the parties to a regional solution are less than equal.

We hope the views we have expressed will be helpful to the Commissioner and to the Minister in determining what course of action should be adopted. We believe that course should be balanced between the need to streamline and the need to preserve what is best in our patent system.

